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HANDBOOK  
OF  
OUTDOOR RECREATION ENTERPRISES  
IN RURAL AREAS

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FARMERS HOME ADMINISTRATION



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## INTRODUCTION

This handbook is an attempt to gather under one cover the information on which Farmers Home Administration representatives can base judgments regarding the feasibility of proposed recreation enterprises and to cite sources where more complete information can be obtained.

Part One should be read to provide a general knowledge of recreation enterprises and how to analyze them.

Part Two is divided into separate chapters on each category of recreation. Only the chapter(s) pertaining to the particular enterprise(s) under consideration need to be studied as the occasions arise. The writer has summarized and quoted only that information deemed essential for making decisions regarding proposals submitted. Anyone attempting to plan a recreation enterprise should avail himself of as many as possible of the references listed at the end of the chapter on that subject as well as any other information available.

✓  
U.S. } Robert S. Crites,  
Recreation Specialist  
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PART ONE

OVERALL PRINCIPLES



## OUTDOOR RECREATION ENTERPRISES IN RURAL AREAS

## PART ONE - OVERALL PRINCIPLES

This handbook will (1) discuss general economic principles pertaining to all outdoor recreation enterprises in rural areas, (2) take up individually and in some detail the main categories of outdoor recreation enterprises pointing up special considerations in connection with each, and (3) give references where more complete information may be obtained on various aspects of outdoor recreation.

All discussion will assume that each enterprise is intended to repay the indebtedness against it and thereafter return a profit or reduce the dues of its members.

## I. INGREDIENTS OF A SUCCESSFUL RECREATION ENTERPRISE

Three ingredients are necessary to any successful outdoor recreation enterprise:

1. Resources or combinations of resources either natural or developed that will bring enjoyment or relaxation to people.
2. Management that will keep the members or patrons happy and entertained and at the same time make the enterprise yield an adequate return.
3. Location within reasonable access of an adequate number of patrons or members and a long enough season to give reasonable assurance of adequate usage.

RESOURCES

Outdoor space in itself is a resource in this day of crowded city dwelling. Thousands of huddled masses in the cities of this country long for a place where they can get out and run and romp -- if they are young enough -- or simply stroll or admire the scenery if they are past the romping stage.

The ORRRC report found that "Driving for Pleasure" was by far the most popular American outdoor entertainment. But the report made no estimate of how many of these pleasure drivers would do something more meaningful if the opportunity were available. The reason many keep driving is no doubt because the places they would

like to stop are either too crowded or have a "No Trespassing" sign.

Income-producing recreation opportunities may crop up in the most unexpected ways and places. For example, one farmer was about to tear down an ancient sod house on his prairie farm. Instead he decided to restore it as a tourist attraction and charge \$1 per car to come in and look it over. It happened to be near a main highway so it developed into a thriving recreation business.

Another farmer put up a sign, "\$1 To See The Cows Milked," and soon found he had to buy more cows to fill the demand. (Continuous, or even intermittent milking isn't the best way to develop a milk cow, of course, but the viewing may bring better returns than the milk).

Home cooking with all the trimmings, as still found in many farm homes is an attraction that will draw vacationers miles away from their city homes.

A wood lot with picnic tables alongside a highway in a populous area can draw city families and tourists. A small pond or lake can be developed for swimming or fishing or picnicking or camping. In winter it can draw skaters if it is in a northern climate.

Steep slopes have ski potentials. Rolling hills have golf possibilities.

The point is that not all recreational resources need to be spectacular. "Beauty is in the eye of the beholder" they say. So also it might be said, "Recreation opportunity is in the eye of the imaginative developer" -- within limits. Which brings us to the next factor.

### MANAGEMENT

This broad heading covers many items such as aptitude, imagination, financing, and labor. It is the proper blend of many ingredients.

Aptitude is possibly the most important single component of any recreational enterprise. To be successful in recreation one must like people in general well enough to put up with their foibles, their moods, and their sometimes annoying habits. He must be enough of a leader to direct their attention to the things that will please them and away from the things that would annoy or disturb them. He must have a fund of knowledge that will impress and entertain them. He must look after their comfort. He must, in short, keep his customer's interest uppermost in his plans at all times.



Aptitude hopefully will include also a "money-making sense." A person with this quality seems to know instinctively what facilities and what forms of entertainment will bring him money. He doesn't waste his time or money on visionary schemes that "will make a million." He sees the dollar within reach and goes for that. Such people aren't in need of a great amount of supervision. It's the ones without this sense that need the guiding hand of the county supervisor.

Because some have an aptitude for farming while others do not, certain observers are led to the conclusion that anyone who has not been a success at farming has little chance of success in recreation and vice versa. It is a mistake to believe that success or lack of it in farming will guarantee success or lack of it in recreation. The farmer who neglected his corn cultivating to go fishing may have such a store of knowledge and enthusiasm on the subject of fishing that he will draw customers from all directions when he develops a fee fishing enterprise. The farm wife who is a perfect housekeeper -- keeps everything spic-and-span and cooks good meals, may drive away farm vacation customers by her fastidious concern about keeping everything neat rather than making her customers comfortable and happy. The grim-faced, hard driving, efficient, successful farmer got where he did by ordering people to do what he said. He would make the poorest kind of recreation entrepreneur.

Imagination. A person with imagination can make up for deficiencies in natural resources. One commonly thinks water or trees or both are necessary for a successful recreation business. Yet look at the farmer who made a successful recreation business with nothing more to start with than a crumbling sod house on a windswept South Dakota prairie plus a good imagination. Every farmer and farmer's wife has a limitless store of interesting and entertaining information that can be a delight and an education to people brought up in the city. All they need is the imagination to put it to purposeful use.

Farm families with a foreign accent may feel that this would be an impossible handicap to them in a vacation farm business. But look in the Vacation Farms Guide and you will find some families advertising the fact they can speak German, Australian or Italian, etc. It's an added attraction to visitors from their native country. More and more visitors from foreign countries are looking for farm vacations when they visit America.

I crossed at least one entire state on a major highway last summer without seeing a single picnic table, yet I would guess there were at least a farm wood lot or a small lake on the average of every mile. Why could not a farmer clear out several spots, put in picnic tables and charge 50¢ per car? Operate it on the honor system if it is far from the house. Where public picnic tables do happen to be available they often are so trashy and littered most people would pay a reasonable charge for a clean place rather than use the public one free.

Financing. A few people have founded successful recreation businesses on a shoestring, but more have failed. In this field, even more than in farming, it is necessary to have good arrangements for adequate financing. This is so for two reasons:

1. Most types of recreation have to build their market. Customers normally aren't waiting at the gate for you to finish your facility.
2. Ordinary commercial credit institutions are not familiar with the economic facts of recreation and are hesitant to commit the money of their depositors or stockholders in an industry they know very little about.

As in the case with farming there are also certain minimum sized economic units for optimum efficiency in the various categories of recreation. For example, if you are going to have a campground you will need a utility building and enough parking spaces to justify construction of such a building. The utility building requires a water system and sewage disposal. Some feel a swimming pool is a necessity. You cannot justify these things if you are only going to have six or eight parking spaces. All of this costs money and the smart operator will be sure he has adequate money budgeted and forthcoming at the proper times to meet his financial needs.

Labor. A farm family adding a recreation enterprise to its agricultural operations often tends to overlook the amount of time and energy that must be allotted to the recreation portion.

Potentially successful recreation enterprises sometimes founder on the failure of someone to anticipate the labor requirements. Preliminary discussions on this subject are dismissed with a wave of the hand and the assertion "We can handle that." But when the time comes they find they can't handle it and poor service results in disgruntled customers or the crops and livestock suffer while the family's labor is consumed waiting on customers. The family's labor resources need to be budgeted in advance as carefully as the money. It may be found necessary to hire additional labor for peak periods, such as week ends. If this is so then it should be provided for in the budget. It isn't economical to have help standing around idle when they aren't needed, so one should have reserves, in depth, of help he can call upon in an emergency.

Many times the individual entrepreneur is in a situation where service is the most important product he has to sell. Public parks and forests may offer low priced or free recreational facilities nearby but some people want higher quality facilities, more exclusiveness, and more personal service. Because a certain proportion of the public is willing to pay for these extras, a private business is able



to thrive alongside of and in spite of a nearby public facility. In fact, the public facility may be an asset because it provides free advertising in bringing people to the vicinity.

Recreation and farming often can be organized in such a way as to make best use of the family labor where either one separately would not. In this respect recreation may be the answer to the problem of underemployment brought about by a farmer's inability to acquire sufficient land to bring his unit up to adequate size from a labor utilization standpoint.

The complimentary or supplementary aspects of proposed recreation-farming enterprises must be examined in detail with respect to their labor relationships because not all combinations work together from this standpoint. Some categories of recreation have peak labor requirements at the same time as certain crop or livestock enterprises. In this case their relationship is a competitive one. A bulletin of the Arkansas Experiment Station 4/\* discusses the results of some investigations in this field. Except for certain forms of fishing and hunting enterprises and riding stables, peak labor requirements came during the summer months.

Labor saving devices can often be used to solve problems. Perhaps the most common one is use of the honor system for fee collections to eliminate the cost of a gatekeeper.

Use of part-time labor fits in well with most recreation enterprises because the weekend is when demand is generally heaviest and also is a time when more people are looking for extra work to supplement their weekday jobs.

Full use of labor as well as facilities is a problem in the northern states, particularly, where the summer season is short. The answer in some cases is development of winter sports, using the same facilities as much as possible.

A saving of labor can be made by many simple expedients such as having trash cans appropriately placed and having rules posted telling patrons what is expected of them in serving their own needs and keeping the place in order.

## LOCATION

It is sometimes possible to overcome a disadvantaged recreation location by the ingenious application of unusual aptitude, imagination, financing, labor, or resources. Yet there are fairly definite rules regarding the juxtaposition of the recreation facility and its potential patrons. Other factors are access and location with respect to the other similar or complimentary facilities.

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\* Figures denote references at end of chapter.

Distance from population centers. In a paper presented at the Virginia Polytechnic Institute Symposium on Recreation, February 11, 1964, Gordon D. Taylor of the Canadian Parks System cautioned: "Do not be led astray by the glowing reports of the explosion in outdoor recreation or by the apparent business opportunities presented by the every increasing amounts of leisure time available, discretionary disposable personal income, increased mobility, and more and more people . . . . They may well apply over broad areas, such as the nation, but if I was being asked to invest my dollars in a recreation enterprise, I would want a good deal more in the way of solid facts before I applied pen to cheque book.

"Numerous studies in recreation have shown that there is a rapid decline in the number of visits per capita to be expected from a population center as the distance to the recreation area increases. The relationship between visits per capita and distance may well be logarithmic. At Banff National Park in the Canadian Rockies there is one visit per capita from a distance of 100 miles. The rate has dropped to .34 visits per capita at 250 miles, to .17 at 500 miles, and .06 at 900 miles (Taylor, 1964). These figures are taken from a major national park with a worldwide reputation and are not from a local or a small area.

Taylor continued his observations on distance traveled by recreation seekers, noting that "a recent study conducted by the Detroit Metropolitan Commission (1959) . . . showed that park visitors travel about 12 miles from home for the park outing on a weekday and about 18 miles on a Sunday.

"Distance will affect the type of recreation demanded in addition to the amount. As the distance from the population center increases, the amount demanded will decrease as has already been pointed out, and the type will change from predominately single day use to multiple day use.

"People out for a single day trip travel very short distances."

By way of systematizing his observations Taylor then sets up four zones radiating out from any given population center.

ZONE 1: This zone will extend outwards from the city for a travel time of 30 to 45 minutes. In this zone demand will be for swimming, picnicking, resting and group outings. The use will be characterized by intensive day use by predominately local residents. Use will be steady day by day but there will be an emphasis upon week ends and public holidays.

ZONE 2: This zone will extend outwards from the Zone 1 for a travel time of two to two and a half



hours from the city. Recreation activity demand will be the same as in the first zone but the intensity of use will change. The day-to-day use characteristic of Zone 1 will give way to an emphasis on week end use. Day use on Sundays will be heavy but light on other days. There will also be demand for overnight facilities particularly for local residents on week end trips.

ZONE 3: This zone extends outwards from Zone 2 to a travel time of four hours from the city. The main emphasis will be upon week end overnight use and upon the provision of facilities for people who will be spending a day or two in the zone. Day use will be relatively light and originate primarily from highway travelers. Picnicking and resting will be the particular facility demands of this group. Some overnight use by vacationers could also be expected.

ZONE 4: This zone extends outward from Zone 3. Vacation use will be most important with people looking for a place to spend all or part of their annual holidays. Week end use on long week ends will be important along the inner portions of the zone. Facilities for overnight accommodation and a complex of recreational developments to attract and hold people will be required. Day use will come primarily from highway travelers and will be served by facilities near the highway. Any other needs will be met from sites developed to take care of the visitors who remain in the area for some time."

Access. Though the distance may not be great the difficulty of access may isolate the prospective location from customers. This does not always need to be a handicap, however, because that which reduces the quantity of clientele may at the same time increase the quality. Some people will pay a premium for exclusion of the crowds.

Proximity of similar facilities. This can work both ways but needs to be investigated. If there are no similar recreational facilities nearby this could mean that an opportunity exists for starting one. On the other hand it could be a warning flag that the location has drawbacks you have overlooked. If the area has numerous facilities for the type of recreation being considered, but they are overcrowded, this may be a good location in which to start another one.

Proximity of other attractions. A vacation area that attracts numbers of people will generally need a diversity of interests if it is to keep families coming back year after year. Some members of a family may like golf while others prefer to swim or ride horseback.

## II. SPECIAL CONSIDERATIONS THAT APPLY TO ALL RECREATION CATEGORIES

Combinations of enterprises. The different categories in this handbook are generally referred to with the inference that they are single-category types. Actually very few are that. The majority of recreation businesses seem to be a combination of from two to several categories. Examples are fishing-boating-camping or fishing-swimming-golfing, or a vacation farm that includes swimming-horseback riding.

Some of these are minor supplements to the main enterprise, others might be better termed complimentary. Often they are developed as an added inducement to draw customers to the main enterprise. A word of caution needs to be added on this last point, however.

Patrons are prone to express the desire that the enterprise should have this or that additional feature. After the owner has heard the wish expressed by two or three patrons he may begin to think he has a public clamor for adding swimming, or a fish pond or a golf course to his facility. Before he makes a decision he would do well to answer several questions pertaining to the contemplated additional facility, such as:

1. Do I need this extra facility to get and hold customers for my existing facility?
2. If so, will it answer the need or simply lead to demands for more additions?
3. Will there be a chance to add an extra charge for this additional facility and if so how much? Will it pay off its cost and add to the net income?
4. Will I need to hire additional labor?
5. How much additional management effort will it take? Can I handle it?
6. Can I secure adequate long-term financing to develop the additional facility?

Cooperative enterprises. "There are many opportunities for resource owners to join together in a cooperative to more effectively sell their services, manage their resources, and continue individually-owned resources by combining them into economic units. Major advantages of a joint cooperative venture are as follows:

A. "Joint promotion and advertising spreads costs across greater volume. The brochure and other joint advertising methods used by the Ohio Farm Vacation Association is a good example of like facilities being advertised. Another way of organizing is to group different types of facilities which compliment each other. (Camping-fishing-swimming-hunting, etc.) Cooperative advertising can make newspaper and magazine ideas, radio and television spots, billboards, etc., economically feasible.

B. "Combining physical resources can provide tracts large enough to warrant a recreational enterprise, i. e., two or more farms combining their acreage for hunting . . . . ll/

"One example of this type would be a combination of land for hunting as represented by the Custer County, Nebraska, pheasant project. By buying one permit, you can hunt for pheasants on all farmland in the county. ll/

C. "A group of landowners can more feasibly afford to hire competent management. Individual units might not support 'top-flite' managers, but in combinations such a manager could be fully employed.

D. "A cooperative franchise arrangement can preserve the individual ownership and operation of given resources, facilities and services, and at the same time provide for strict quality and other pre-determined standards that would be common to all franchises. ll/

E. "Joint purchasing of commodities to effect economies in cost is another type. One business analogy to this would be the Independent Grocers' Association, which was started to affect economy in wholesale purchasing. Recreation enterprise owners could do this in purchasing supplies, etc." ll/

In February 1963, plans were being formulated for organizing what is now the Michigan Association of Rural Recreation Enterprises, Inc. (MARRE). Its purpose is "To unite in one organization all rural recreation enterprises in the State of Michigan and to further the interests of rural recreation entrepreneurs in meeting the demand for rural recreation opportunities." ll/

"The Ohio Farm Vacation Association was organized in December 1961 to help members publicize the farm vacation opportunities available on their farms." ll/ County associations were organized as early as 1959.



A group of farmers in a 7-county area of north central Arkansas in 1963 organized the Arkansas Ozark Farm Vacation Association and published a pamphlet picturing and describing the facilities offered by its members.

Architecture and engineering. For a large recreation complex it is desirable to hire a professional recreation planner or at least a professional architect or engineer. For small developments this is not always economically feasible.

Soil Conservation Service is authorized to perform some planning and engineering on farmland.

Construction plans. The Soil Conservation Service has selected the best plans from all over the nation for many types of recreation facilities. They are listed in the appendix to this handbook. They cover the following general subjects:

1. Designs and layouts most frequently used:

- Buildings
- Concession stands
- Fireplaces and trash disposers
- Outdoor games
- Picnic tables and shelters
- Rest rooms
- Roads, parking areas, fences, gates, bridges
- Water area structures

2. Designs and layouts occasionally needed or needed in limited areas:

- Buildings and cabins
- Buildings - concession, group, miscellaneous
- Camping
- Fireplaces, cooking shelters, waste disposers
- Nature centers and trails
- Outdoor games
- Picnic tables and shelters
- Plans for recreation parks
- Rest rooms
- Roads, entrances, steps, etc.
- Shooting preserves
- Signs and displays
- Water area structures
- Water supplies

(See appendix for detailed list)



The Extension Service, Forest Service and lumber dealers are other possible sources of plans.

Liability. Every recreation enterprise should be protected by adequate liability insurance in addition to the other insurance coverages. Liability insurance will provide legal aid if the enterprise is sued and will pay any judgments awarded by the court, up to the limits of the policy.

In some cases insurance companies depend on a "rating" being made in each case. Some companies have standard rates for certain recreation categories. In other cases the rate varies according to the total volume of business. Some operators carry a policy covering only the recreation season. Others are covered the year around.

Since recreation for a fee on farmland is a comparatively new development, not all insurance companies have had experience with this type of enterprise. In such cases it seems to be the practice to charge rather high fees in lieu of actuarial data. Many recreation entrepreneurs have found that by "shopping around" they are able to get insurance at half the cost. One riding stable was paying \$53 per horse per season for a policy that covered hospitalization as well as liability. It finally dawned on the owner that practically everyone carries their own hospitalization insurance anyway, so he found a reliable company that would write a policy covering liability only and the cost was reduced to \$24 per horse. Horseback riding seems to be the activity for which the highest liability rates were charged.

Some prospective recreation entrepreneurs have avowed they were kept from going into recreation by the high cost of liability insurance. This is nonsense for two reasons: (1) it isn't really this high if you shop around, and (2) if it is high, do what all other businesses do -- pass it on to the customer.

Some operators of recreation enterprises have discussed the possibility of organizing statewide or even a nationwide cooperative insurance company to serve recreation business. This could bring about significant savings.

Liability insurance is of sufficient importance in most recreation enterprises that it should be definitely provided for in the expense budget.

A thorough discussion of the subject of liability is contained in a publication put out by the Economic Research Service of the USDA, and is included in the appendix of this handbook.

Taxes and licenses. Federal tax laws change frequently. State and county tax and licensing regulations vary from one jurisdiction to another. Only the most general terms can be used, therefore, in discussing taxing and licensing requirements that pertain to recreation.

1. A recreation enterprise will be required to pay most of the types of taxes, both federal and state, that apply to business. These taxes are different in some ways from the taxes farmers normally pay. Therefore, it would be advisable for a farmer in the recreation business to keep his income and expense as well as capital investments separate for recreation and farming.
2. Since the application of certain tax laws to rural recreation enterprises may be uncertain the recreation entrepreneur may, in disputed cases, find it justifiable to pay certain taxes "under protest."

In one state certain county assessors were interpreting particular laws as applying to travel trailers in such a way as to make privately-operated trailer parks almost totally unfeasible. Organized protests from a statewide association are often the answer in such situations.

Licenses vary as much as taxes from one state to another and from one county or municipality to the next. Often rural based recreation businesses are exempt from municipal taxes and licenses that a similar business within the city limits would be required to comply with.

It is always a good policy to contact the state and local tax officials to determine in advance what taxes apply to the particular recreation categories which one contemplates operating. Then proper provision can be made for these items in the expense budget.

The Economic Research Service issued a paper "Taxation of Recreational Enterprises on Private Rural Lands," in January 1964. 10/

Length of season. The greatest limitation on economic feasibility with respect to most forms of outdoor recreation is length of season. The farther north the greater the problem, generally.

There are ways of alleviating this problem in at least some areas and in some recreation categories. Some ski areas,

especially those with spectacular chair lifts, are staying open during the summer and operating the lift for summer tourists. Swimming pools are extending their season into the cooler months by installing covers.

Reduced rates for off-season customers can sometimes stretch out the season for certain types of recreation. Vacation farms and youth camps can sometimes cater to hunters and thereby make additional use of facilities and equipment.

People with imagination will find ways to solve this problem.

Health and sanitation requirements. Requirements in this field vary and are primarily state and local regulations. They may concern treatment of sewage, treatment of water in swimming pools or lakes, serving of food, and medical examination of children attending camps. Local health officers are the ones to check with on this.

The Public Health Service has published a bulletin, "Environmental Health Practice in Recreational Areas," <sup>12/</sup> which gives excellent information on health, sanitary and safety factors to be considered in recreational developments.

Wherever environmental conditions permit, the use of stabilization ponds or lagoons for sewage disposal should be considered as a possible way of reducing developmental costs.

Zoning regulations. These may affect recreation facilities in some cases, so it is advisable to check with county officials early in the planning stage to determine whether there are any zoning regulations that apply.

Safety measures. Safety can best be promoted through cooperation of the patrons. Posting signs in appropriate places, warning of possible dangers and recommended precautions may save injuries and possibly lives.

It is advisable to check with state and local officials to determine whether there are any safety regulations that might affect the planned recreation facility.

Advertising is a necessity with any kind of income-producing recreation enterprise. The form it takes will vary with the type of recreation but may include newspapers, magazines, radio, TV, billboards, or brochures. It is an item of expense that must not be overlooked in the budget.



### III. ANALYZING THE RECREATION PROPOSAL

Let us assume that preliminary examination of a proposed recreation enterprise indicates that resources, management and location factors are favorable; and a study of the special considerations discussed in the preceeding section have failed to disclose any unsurmountable obstacles. The next step would be to make some projections to determine whether the proposal was economically feasible.

Basic to all other considerations is the problem of anticipated income, and basic to that is the question of how many people can be expected to patronize it. There are a number of ways of approaching this problem, none of them capable of returning an exact answer.

Patronage. Under the separate chapters in Part Two of this handbook suggestions are given in some instances for calculating the amount of patronage. Generally, visits to similar enterprises in the area or in other localities will give some indications of ways to estimate the number of customers. Various advertising schemes can be used to stimulate business. Any arrangement by which an organization can be induced to contract for a definite number of its members to use the facilities each season at a stipulated rate is greatly to be desired.

The Outdoor Recreation Resources Review Commission made some studies of the relative popularity of various forms of recreation among the general population. The results of these studies are expressed in the table on the following page in terms of activity days. This table can be used to get a broad general estimate of the amount of participation that may be expected for any particular form of recreation. Here is an example of how this table might be used:

Consider a proposed riding stable 15 miles from Cincinnati which has a population of 500,000. Table I shows that people in North-Central U.S. average 1.25 activity days per person 12 years of age or over in horseback riding. Since 73.3 percent of the population is 12 or over, you would multiply 500,000 by .733; this gives you 366,500 people. Multiply 366,500 by 1.25 and you get 458,125 activity days.



TABLE I

Number of Activity Days Per Person 12 Years of Age and Over  
During 1960-61, by Major Region and by Season of the Year,  
48 Contiguous States by Outdoor Activity

Outdoor activity	United States 1/					Region 2/			
	Year	Summer	Fall	Winter	Spring	North- east	North- Central	South	West
Driving for pleasure	20.73	6.68	4.34	4.66	5.05	21.29	21.32	19.63	20.42
Walking for pleasure	17.93	4.34	4.22	4.88	4.49	24.62	16.08	14.65	16.67
Playing outdoor games or sports	12.71	3.63	2.77	2.58	3.73	12.31	11.68	12.88	14.44
Swimming	6.47	5.15	.63	.16	.53	7.97	5.34	5.54	7.63
Sightseeing	5.91	2.20	1.38	1.17	1.16	5.11	6.64	5.09	7.46
Bicycling	5.15	1.75	.93	.87	1.60	5.38	4.98	5.32	4.64
Fishing	4.19	1.99	.75	.38	1.07	3.26	4.01	5.30	3.93
Attending outdoor sports events	3.75	1.32	1.23	.45	.75	3.22	3.61	4.18	4.07
Picnicking	3.53	2.14	.62	.21	.56	3.77	3.64	2.77	4.30
Nature Walks	2.70	.75	.69	.62	.64	2.79	2.42	2.65	2.88
Other boating	1.95	1.22	.36	.12	.25	1.77	2.21	1.86	1.78
Hunting	1.86	.19	.73	.80	.14	1.35	1.79	2.58	1.36
Horseback riding	1.25	.42	.21	.20	.42	.74	1.08	1.50	1.98
Camping	.86	.46	.20	.07	.13	.55	.65	.79	2.00
Miscellaneous	.57	.40	.08	.05	.04	.82	.60	.24	.63
Ice skating	.55	3/	3/	.52	.03	1.07	.99	.05	.06
Sledding or tobogganing	.51	3/	3/	.44	.07	1.18	.46	.28	.12
Hiking	.42	.26	.06	.05	.05	.41	.35	.35	.72
Water skiing	.41	.30	.05	.01	.05	.32	.27	.54	.62
Attending outdoor concerts, drama, etc.	.39	.21	.08	.03	.07	.50	.34	.29	.48
Canoeing	.12	.07	.02	.01	.02	.13	.13	.10	.12
Sailing	.11	.05	.04	.01	.01	.17	.07	.04	.13
Mountain climbing	.09	.04	.01	.01	.03	.08	.05	.14	.09
Snow skiing	.07	2/	3/	.06	.01	.18	.07	.02	.04

1/ Months included in each season: summer, June-August 1960; fall, September-November 1960; winter, December 1960-February 1961; spring, March-May 1961.

2/ Regions are the standard delineation of the U.S. Census Bureau, excepting Alaska and Hawaii.

3/ Less than 0.005 days per person.

(Source: National Recreation Survey, Commission Staff, ORRRC Study Report 19.)



Horseback riding has a longer season than many outdoor sports so you might assume 200 days and divide that into 458,325 to get 2,241 riders per day average. This tells you the potential business is there. You would want to consider some modifying factors such as: How many other riding stables are already in the area? What level-of-income families predominate on the half of the city nearest the proposed facility? (If the facility is on the low-income side of town the driving time might be too long for the actual potential customers.)

After the most exhaustive studies have been made on the expected patronage the final point to remember is that it takes time to build up clientele in most types of recreation businesses. A general rule is that, all things being equal, the enterprise will lose money the first year, break even the second year and make a profit the third year. A few fortunate people "land running" and make a profit the first year, but this is an exception.

Rates. Preliminary observations on this subject would indicate that farmers and rural people tend to set their rates too low. This is better than setting them too high, however, because once you get people in the habit of coming you can raise the rates gradually without losing their business, whereas you may not have a second chance at people who were driven away the first time because your rates were too high.

Visiting similar enterprises in your area and observing their rates is a good beginning move before establishing your own rates. The chapters in Part Two of this handbook give suggested rates for the various categories.

Following is a compilation from a USDA bulletin of rates for most types of recreation: 7/ (See next page.)



TABLE II

	Unit	Charge
<b>Vacation farms and ranches:</b>		
Room and board, adult	Week	\$35-\$50 <u>1/</u>
Room and board, child	Week	\$25-\$40 <u>1/</u>
Cabin with cooking facilities	Week	\$20-\$50 <u>1/</u>
Fishing and hunting cabins	Week	\$35-\$75 <u>1/</u>
<b>Picnic and sports areas:</b>		
Picnicking, per car	Visit	50¢-\$2
Horseback riding, per person	Hour	\$1-\$3
Swimming, adult	Visit	40¢-50¢
Swimming, child	Visit	25¢-40¢
Rowboat or canoe, each	Day	\$1-\$3
Boat-launching ramp	Visit	\$1-\$2
Skiing (including lift or tow) per person	Day	\$2-\$5
Ski lift or tow, per person	Ride	50¢-\$1.50
Golf driving range, 50 balls		50¢-\$1
Golf, green fee, club member	Day	\$1-\$3.50
Golf, green fee, nonmember	Day	\$2-\$5
Golf, club dues, per person	Year	\$10-\$100
<b>Fishing waters:</b>		
Fishing (warm water), per person <u>2/</u>	Day	50¢-\$2
Fishing (trout), per person <u>2/</u>	Day	\$2-\$3
Fishing (trout), per inch of fish caught		10¢-15¢
Live bait (minnows, worms, etc.)	Dozen	25¢-75¢
Guide with boat and motor	Day	\$15-\$25
<b>Camping, scenery, and nature recreation areas:</b>		
Camping, tent site	Night	50¢-\$2
Camping, trailer	Night	\$1-\$2.50
Camping, trailer	Week	\$5-\$15
Youth camps, per person	Week	\$35-\$50
Scenic or historic sites, gardens, caves, nature trails, etc.:		
Adult	Visit	50¢-\$1.50
Child	Visit	25¢-75¢
<b>Hunting areas:</b>		
Hunting upland game, per person <u>3/</u>	Day	\$1-\$4
Hunting big game, per person <u>3/</u>	Day	\$5-\$15
Hunting waterfowl, per person <u>3/</u>	Day	\$5-\$20
Hunting lease, upland game	Season	\$50-\$300
Hunting lease, big game	Season	\$100-\$1,000
<b>Shooting preserves:</b>		
Hunting, per person <u>4/</u>	Day	\$10-\$30
For kill in excess of specified number:		
Quail or partridge	Bird	\$2-\$4
Pheasant or duck	Bird	\$3-\$8
Cleaning game	Bird	35¢-60¢

1/ Rates may be lower in off season, or higher for deluxe.

2/ There may be an additional charge for catch above specified number.

3/ Additional charge for room and board as on vacation farm or ranch.

4/ Usually includes guide and dogs.



Income. After estimating the number of expected patrons and setting some tentative rates it is then possible to arrive at an estimated income. Do not overlook sources of supplementary income made possible by having recreation customers coming to your place. For example, you may be able to sell farm produced foods to recreation customers after they have tasted or seen on display such items as home cured meats, or home canned vegetables, fruits or relishes.

Expenses. Advertising is a very important item in recreation and one that should be budgeted generously for the first few years. Once a business of this sort becomes established it can go ahead largely on repeat customers and word-of-mouth, but the important problem is to get the customers coming there in the first place. For that, it is generally necessary to advertise. The form this advertising should take will vary with the type of enterprise, the locality, and the type of customers one prefers to get.

Other expense items more or less peculiar to recreation that should be kept in mind are liability insurance, license fees, amusement or entertainment taxes, cost of supplies for resale, maintenance and repair, and communications.

Net income will be the difference between income and expenses or what is left to pay the entrepreneur for his and his family's labor and management and to make a payment on indebtedness.

A survey taken at the end of the 1964 season showed that of the 83 FHA borrowers who received loans for recreation purposes, and had operated for a full season, recreation enterprises increased their net incomes by an average of \$1,458.

Only 14 out of the 83 lost money. Forty out of the 83 made \$1,000 or more. Twenty-five made \$2,000 or more.

After determining the expected net income, one needs to make a final judgment as to whether the land, labor and capital to be used in the recreation enterprise have been earning as much or more in agricultural production. If such is the case it would warrant taking another look to see whether personal desires, future prospects or other considerations weigh heavily enough to justify proceeding with the recreation program.

The next section takes up in separate discussions the recreation categories most commonly chosen by FHA borrowers.



## RECREATION REFERENCES

### General

The following are publications dealing with rural recreation enterprises in general:

- 1 Farm Outdoor Recreation Enterprises in South Carolina, AE 263, W. H. Wiley, Dean of Agriculture; O. B. Garrison, Director, Experiment Station. South Carolina Agricultural Experiment Station in cooperation with Resource Development Economics Division, Economic Research Service, United States Department of Agriculture. August 1964.
- 2 Income Potential from Outdoor Recreation Enterprises in Rural Areas in Ohio, Research Bulletin 964, Gerald P. Owens. Ohio Agricultural Experiment Station in cooperation with the Resource Development Economics Division, Economic Research Service, United States Department of Agriculture. February 1964.
- 3 Income Potential of Various Kinds of Farm Recreational Enterprises in Missouri, B 783, Ronald Bird. University of Missouri Agricultural Experiment Station and Resource Development Economics Division, USDA cooperating. December 1963.
- 4 Opportunities for Improving Rural-Family Income Through Recreation Enterprises, Bulletin 673, Max F. Jordan. Agricultural Experiment Station, University of Arkansas, Division of Agriculture, Fayetteville, Arkansas, in cooperation with Resource Development Economics Division, Economic Research Service, USDA. June 1963.
- 5 Outdoor Recreation..Potential in East Texas, B-1013, Ivan W. Schmedemann, A. B. Wooten and W. D. Franklin. Texas A&M University, Texas Agricultural Experiment Station - Texas Agricultural Extension Service, College Station, Texas. July 1964.
- 6 Private Outdoor Recreation Facilities in Rural Areas of Western Oregon, Special Report 173, O. Wendell Holmes, Jr. Agricultural Experiment Station, Oregon State University, Corvallis in cooperation with Resource Development Economics Division, Economic Research Service, USDA. April 1964.
- 7 Rural Recreation Enterprises for Profit, Agriculture Information Bulletin No. 277, USDA. October 1963.
- 8 Rural Recreation Enterprises in New England, Agricultural Economic Research Report No. 56, Elmer J. Moore. Resource Development Economics Division, Economic Research Service, USDA. May 1964.

Topical

- 9 "Liability and Insurance Protection - for Farmers Who Have Income-Producing Recreational Facilities," ERS-120, John D. Rush and Ralph R. Botts. Economic Research Service, USDA. June 1963. (See Appendix.)
- 10 "Taxation of Recreational Enterprises on Private Rural Lands," ERS-144, Bennett S. White, CSES; Glennwood Smith, REA; and C. B. Markeson, FCS. Published by Economic Research Service, USDA. January 1964.
- 11 Speech prepared for Recreation Cooperatives Session at the American Institute of Cooperation Conference, Columbia, Missouri, August 11, 1965, by Karl F. Munson, Program Leader in Outdoor Recreation, Federal Extension Service, U. S. Department of Agriculture.
- 12 "Environmental Health Practice in Recreational Areas," Public Health Service Publication #1195. May be obtained free as long as the supply lasts by writing Public Health Service, Washington, D. C. 20201. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. Price 55 cents.

PART TWO

THE MOST COMMON KINDS OF RECREATION ENTERPRISES





## OUTDOOR RECREATION ENTERPRISES IN RURAL AREAS

### PART TWO

#### THE MOST COMMON KINDS OF RECREATION ENTERPRISES

The kinds of recreation enterprises referred to in this handbook are those which have been the basis for the greatest number of loans from Farmers Home Administration. The nomenclature, may not necessarily fit exactly that which has been set up by other agencies and programs in the recreation field. It is believed, however, that most forms of outdoor recreation facilities to be found in rural areas will be touched upon under some heading in the pages that follow.

The categories of recreation enterprises covered here are:

- |                                |                         |
|--------------------------------|-------------------------|
| 1. Vacation Farms              | 7. Camping Areas        |
| 2. Youth Camps                 | 8. Nature Trails        |
| 3. Golf Facilities             | 9. Riding Facilities    |
| 4. Marinas                     | 10. Fishing Facilities  |
| 5. Swimming Facilities         | 11. Hunting Facilities  |
| 6. Picnicking and Sports Areas | 12. Winter Sports Areas |

Seldom do any of these enterprises occur alone. They generally are developed in various combinations. If the combination is quite large in scope it may be referred to as a recreation complex.

The categories are defined as follows:

1. Vacation farms - includes ranches too. Covers those that provide lodging and board and also those that provide only lodging. Lodging can be provided either under the same roof with the family or in separate cottages or cabins; these latter may even be located on a separate farm tract under the control of the recreation entrepreneur. Such items as a swimming pool, riding horses or a fish pond may be provided as added attractions and in such cases are not considered separate enterprises unless a separate charge is made for their use or they cater to and receive considerable patronage from other than farm vacationers.

2. Youth camps could also include camps for adults. They are distinguished by being set up to handle people in groups or as organizations for periods of generally a week or more and frequently for the entire summer season. They generally include a central dining hall, recreation lodge and dormitories. They may accept boys and girls at the same time or at different times or may cater exclusively to one sex. They may also specialize in some particular activity. Some, for example, are set up as baseball camps and some are

specialized music camps. Included in this category, but somewhat different in arrangements, are the day camps which are used for taking care of youngsters only during the daytime.

3. Golfing facilities cover regulation golf courses, both 9-hole and 18-hole. Also cover Par 3 courses, both 9-hole and 18-hole, as well as driving ranges and miniature golf.

4. Marinas include boat docking facilities, dry boat storage, launching ramps, boat rental facilities as well as outboard motor rental, gas and oil and other supplies for boats and boaters.

5. Swimming facilities include swimming pools, both open and enclosed, and swimming beaches on ponds, lakes or rivers.

6. Picnicking and sports areas include picnicking tables, both in the open and under pavilion roof, together with sports areas such as for baseball, horseshoes and volleyball that generally go with this type of thing; they may include only one type or any number of types of sports areas. These are day use type of facilities only.

7. Camping areas include camping space and facilities regardless of the amount of conveniences provided, in other words, parking for both the tent campers and travel trailer campers and all variations in between those two. They include two general types of camps, the transient camp and the vacation or destination camp.

8. Nature trails cover all types of nature trails that are a primary part of the recreation enterprise. If they are just a drawing card for other types of recreation enterprises they are not classed as a separate category.

9. Riding facilities. These cover everything to do with horseback riding, as for example, riding by the hour, instruction in riding, or boarding other peoples' horses for a fee. They may also include riding camps, so called, which may be either day camps or weekly camps. They may include taking groups on hunting trips with pack animals. They may also include such spectacular activities as stage coach rides or hay rides.

10. Fishing facilities. These may include either ponds or lakes developed specifically for fishing or they may include access rights to permit fishing on or beyond the land



of the owner. They may include float trips down rivers or fishing guide service, or even bait production.

11. Hunting facilities may include hunting areas in which farmers operate cooperatively to control the hunting on their lands or it may include shooting preserves or trap shooting or sneak traps. It may also include anything connected with hunting dogs, such as boarding kennels or field trials or raising hunting dogs, or guide service for hunters.

12. Winter sports areas. These are predominantly ski areas but may also include ice skating rinks or curling rinks, or they may include open air skating facilities or the provision of parking space for those attending nearby ski areas.



## CHAPTER 1

### VACATION FARMS

This is perhaps the easiest, least expensive type of recreation enterprise to get into. Yet it can be one of the most remunerative, not alone financially but educationally and spilitually. As one farmer said, "All of our guests have been very nice and we feel we are lucky to be able to sit in our own backyard and travel, as it were, into the homes, businesses and factories, and even foreign lands of our guests. Our teenagers have invitations to spend the holidays with some of our guests in New York City . . . . We do not put ourselves out to do a lot of extra things for our guests. Mostly they like us just to be friendly and ordinary." (From a letter written to Farm Vacations and Holidays, Inc., by a farm host.)

A vacation farm can be the starting point for a more specialized type of recreation such as a riding stable, youth camp, and numerous other categories.

### REQUIREMENTS

Many farms and ranches have the requirements of a vacation farm. These are:

- A. A family that enjoys associating with people and is willing to provide for their comfort and pleasure.
- B. Comfortable living and sleeping accommodations.
- C. Good home cooked meals.
- D. Ample recreation activities, either on the farm or nearby.
- E. Prices that are reasonable.

The farm family. This is the most important ingredient. The family must be the sort other people like to be around. They must be interested in and willing to talk about and explain the many wonderful and exciting things that take place on a farm, from the farrowing of pigs to the tilth of soils. Any family farm can be a miniature Disneyland to city people who never saw milk except in bottles, eggs except in cartons, or apples except in tissue paper.

The farm family should be willing to provide little services for the guests if needed. They should, in short, treat them like relatives who have come for a visit.

Facilities. Indoor plumbing is necessary; a separate bathroom for each family is desirable.

A number of variations are found with regard to food and lodging. Both hosts and guests vary in their desires.

(a) With the family. The most popular type of vacation farm seems to be where the guests occupy spare bedrooms in the farmhouse and take their meals with the family. Many of the big, solid, old two-story farmhouses around the country are now too large for most present day farm families, especially after the children are gone. These houses have an attractiveness to urban guests, especially if some of the old fashioned furniture and accoutrements are still in the rooms. It takes very little expense, in many cases, to fix up such houses for guests. Adding an extra bathroom or two is probably the most common need.

In some cases separate cooking facilities have been installed for the guests, where they can cook all or part of their meals although still lodging under the same roof with the farm family.

(b) In separate housing. The farm may have an extra house or a bunkhouse that is not being used and that can be put in good shape and rented to guests.

Or the farmer may want to build some small cabins, either near the house or along a stream or lake on the farm.

In such cases it would still be possible for the guests to eat with the family. On the other hand, kitchen facilities could be included in the separate housing and guests allowed to do their own cooking.

Old types of farm machinery, if cleaned up and displayed in the yard, can add to the interest. Old fashioned churns and butter molds are other examples.

A handy graveled parking place for the guests' cars is important.

Riding horses are generally an attraction, especially if there are children in the guest families.

If there isn't a suitable pond or lake on the farm or an accessible swimming facility in the neighborhood, then the farm family may want to build one as soon as the business justifies it.

Meals. Generally, an important attraction to the vacation farm is the chance to eat home cooked meals, served family style around a big table. The quality of cooking can be the main attraction and the thing that induces visitors to come back year after year.



Entertainment. Most families interested in farm vacations require very little planned entertainment. Their main desire is to participate in country living -- wandering through the fields and woods, sometimes helping with the farm work, eating home cooked, family style meals. Desires vary with individuals; some vacationers may want more entertainment than others, but most of them are willing to fit in with the farm family's schedule.

If there are community activities such as square dances, county fairs and rodeos, or recreational facilities such as golfing, swimming, fishing, and boating available in the area these may add to the attractiveness of the enterprise.

For many vacationers, their entertainment is in the novelty of watching or participating in farm activities such as milking, feeding the pigs, haying, harvesting, or gardening.

Type of location. People will, on occasion, travel a long distance for a farm vacation. Most of the guests, however, will come from cities within a day's drive. Scenic areas are more attractive generally, but any location where farm activities are going on will be attractive to some people.

Size of farm. This isn't generally a limiting factor. Some advertisements have been observed from farms of less than 10 acres. One very busy vacation farm has only 40 acres. Most run larger however. The 1965 Farm Vacation Guide, for example, list 47 farms in the state of New York. The smallest is 13 acres; the largest is 2,300 acres.

## FINANCIAL CONSIDERATIONS

Investment needed. Some vacation farms are started without any additional investment. It varies widely, depending on a number of factors, such as: (a) existing condition of house, (b) how many guests it is desired to plan for, or (c) how much in the way of entertainment facilities it is desired to provide. Generally, the cost of providing the housing, cooking, and recreation activities is not substantially beyond that of the farm and home. This is an enterprise that the farmer can expand as he makes new contacts.

Rates to charge. Board and room is usually by the week. This includes living and sleeping quarters for the guests, meals, use of farm facilities for picnics, fishing and swimming in farm ponds, and other activities connected with farm living. Sometimes an extra charge is made for horseback riding.

Charges range from \$35 to \$75 per week for each adult, and \$25 to \$40 for each child.

Most vacation farm operators do accept customers for week ends and some accept guests who are going to stay only one night.

The season will vary, depending upon family help, climate, and type of outdoor recreation. In the northern states, the season usually runs from June to September, the available time for vacations for families with school children. Many, however, extend the season where hunting and fishing are attractions, thus making increased use of the facilities. Chapter 11, Hunting Facilities, discusses rates for hunters.

Prospective income. Families with three spare rooms have expanded their annual guest income from \$300 the first year to \$3,000 or more in four years with the same three years. A survey of FHA borrowers in the vacation farm business showed an average net income of \$1,073. Most of these were for the first year. The highest was \$4,123. The lowest, minus \$148.

#### SPECIAL CONSIDERATIONS

For certain activities, state and local governments require permits and have a variety of health and safety regulations. These should be checked and complied with. Consideration should be given to liability insurance for protection of the owner against possible damage suits in case of injury of any guests.

The business may be slow in developing, so it would be wise not to make elaborate expenditures that would require the maximum patronage to make repayments. Facilities and services can be added as business increases.

Advertising. This is a business that has a high percentage of repeat customers. Guests will spread the word among their friends if they enjoyed their vacation. Therefore, it might be advantageous to make a special effort in advertising the first few years, with the expectation that this item of expense can be reduced after a reputation has been established.

Small advertisements placed in city newspapers or magazines, road signs, radio or television, brochures placed in public places. There is a nationwide directory published by:

Farm Vacations and Holidays, Inc.  
36 East 57 Street  
New York, New York 10022  
Telephone: ELdorado 5-6334

In some places the farmers have banded together and advertised through an association that promotes the whole area.

Examples are:

Arkansas Ozark Farm Vacation Association  
Mrs. Fred Daum, Secretary  
Box 3  
Pleasant Grove, Arkansas 72567

State of Ohio Farm Vacations Association  
Mrs. Franklin Fuss, Secretary  
Route 4  
Carrollton, Ohio

In some states certain agencies of the state government publish a list of the Vacation Farm enterprises in the state, as for example:

Pennsylvania Department of Commerce  
Harrisburg, Pennsylvania

and

West Virginia Department of Commerce  
Charleston, West Virginia

REFERENCES

- 1 Farm Vacations...a farm resource, L-111, G. Howard Phillips. Agricultural Extension Service, The Ohio State University.
- 2 Farm Vacation Enterprises in Ohio, ERS-164, Jeanne M. Davis. Resource Development Economics Division, Economic Research Service, USDA. May 1964.
- 3 Farm Vacation Associations--Why--How, ESC-558, Federal Extension Service, USDA. September 1964.
- 4 People Are Looking For A Farm Vacation, Leaflet No. 362, George F. Metzler. Agricultural Extension, University of Arkansas, Division of Agriculture and U. S. Department of Agriculture. May 1964.
- 5 New England Farm Vacation Businesses, Characteristics and Owners' Experience, Agricultural Economic Report No. 60, Jeanne M. Davis. Economic Development Economics Division, Economic Research Service, USDA. October 1964.





## CHAPTER 2

### YOUTH CAMPS\*

"The greatest individual contribution which has been made to the education of American youth," said Harvard President Charles Eliot, more than a half-century ago, "is the summer camp."

There are more than 7,500 resident camps, serving 3,500,000 children, in operation in this country each summer. Yet, the American Camping Association estimates there may be as many as 40,000 camps needed by 1980.

Results of a survey made in 1958 showed that many state parks were unable to fill the demand for group camping facilities. "State park agencies reported an increase in use from 1,480,000 camper days in 1950 to 2,075,000 camper days in 1958." 3/\*\*

Camp directors and leaders are a dedicated group of people who are greatly interested in maintaining high standards among the camping fraternity. Says one, "The philosophy of camping today includes something more than the means of providing an income, the use of available land, the provision of facilities just for fun and recreation." . . . "The operation of a camp for boys and girls is a serious responsibility involving the mental, physical, social and spiritual growth of the child. The prime reason for camping standards is the protection of children and standards for camping personnel ranks highest in importance."

This is quoted by way of stressing the fact that the Farmers Home Administration must not finance any individuals or associations that would contribute to a lowering of the high standards set by American campers.

The American Camping Association of Martinsville, Indiana has issued numerous publications on camping, several of which are quoted in this chapter. This association stresses the importance of camping as a strong factor for counteracting the debilitating influences of soft city life in our affluent society. The recommendations of the Association scorn the easy life and the provision of too much comfort for youthful campers. "Work, even grubby or monotonous work, can be a fulfillment for a youngster craving self-esteem and its consequent boost for security. Work at its best can be creative, joyous and gay."

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\* This refers to camps with an organized recreational program. Most of the suggestions contained herein can also be applied to camps for adults.

\*\* Note: Numbers indicate quotations from references listed at end of this chapter.

"Real camping needs a wilderness setting or as close an approximation as can be achieved." . . . however. . . . "Overuse and careless use can damage the best of wilderness sites." 2/

"As one camp planner has remarked, 'Ideally, a campsite need have only one building -- that in which to store city clothes!'" 2/

"One set of successful summer camps has found that their best type of sleeping cabin is a simple rectangle 16' x 28', with the front completely open and unscreened. The beds are built-in, double decker wooden bunks with light mattresses." 2/

These statements are quoted to emphasize the fact that luxurious and expensive accommodations should not be a part of a youth camp.

### THE FARMER AS A CAMP LEADER

Aptitude of the camp operator or manager is of primary importance. More than any other type of recreation, this requires an outgoing personality, imagination and vigorous leadership. The camp leader's personality sets the tone for the whole group. Misbehavior problems are not avoided by establishing long lists of "Don'ts" but by keeping the youngsters busily engaged mentally and physically.

Every farmer is a storehouse of information of breathtaking interest to city youngsters. He knows all sorts of interesting things about plants, animals, insects, fish, birds and machinery. He could talk all summer without being boresome. He has a golden opportunity to teach some habits of conservation, cleanliness, health, and thought that will have a lifetime effect on young city dwellers.

But he must like young people and be able to control them or he will be lost in this business.

Youth camps hold many opportunities for improving the incomes of farmers and the attractiveness of rural communities. Many individual farm families are already making money operating camps where youth may engage in organized outdoor recreation activities. Opportunities exist for rural groups to establish youth camps that will provide wholesome recreation for rural and urban young people and that will provide employment for local residents.

Definitions. There are two general types of youth camps. These are:

Summer camps. These provide overnight accommodations and generally charge by the week for room and board.

Day camps. These are camps where the youth live at home and go back and forth each day.

## SUMMER CAMPS

These are sometimes started on a small scale with, for example, a minimum of eight youth. Thus, a farm family can frequently operate the camp without the employment of additional help and often without the construction of additional buildings or facilities.

Location. Should be away from main highways. "Should provide maximum of privacy and be located away from densely-populated areas and undesirable resorts." 4/ May be isolated as long as accessible. Consult the Soil Conservation Service for advice on suitability of soil types and terrain.

Acreage. Should be adequate to provide for various kinds of outdoor activities, such as horseback trails, archery and rifle range, swimming, fishing and boating.

"Camps should have one acre of ground per camper available for their camp programs. This may include adjacent natural camp resources, such as state and Federal parks and resources, where these areas readily lend themselves to the program of the camp." 4/

The ACA survey of 1958 disclosed an average of 2.01 acres available for each camper in the 3,646 camps surveyed.

The farmer with a youth camp as a supplement to his farming would no doubt find his operations cramped on anything less than an 80-acre farm, although circumstances could alter this minimum. Land unsuited for crops is often well adapted for a camping operation.

Counselors must be provided. Most authorities recommend one counselor for 6 to 8 youth. They should be at least 19 years of age, preferably 20 to 21. Young people who have attended camp in their younger years will often want to return as counselors when they are old enough. Local rural youth with 4-H or FFA or Scout training are often available during summer vacation from college. Salaries for counselors start at \$200 per month plus room and board.

Length of season for youth camps generally runs from June 1 to September 1.

Age groups. A North Carolina Bulletin lists 79 youth camps in that state. 6/ Thirty-nine variations in age categories were listed. The greatest spread was 9-23, the narrowest 12-14, the most common 7-17 (with 10 camps), the



youngest 4-16. Twenty-five of these were for boys, twenty-four for girls, twenty-five for boys and girls, one music camp, one baseball camp, and three camps for handicapped.

Thus, age and sex groupings can be chosen in a wide variation according to the desires of the operators and the needs of the area from which participants will be drawn. Forty-five camps were privately owned. Others included Y.M.C.A., Elks, Boy Scouts, Girl Scouts, etc. National surveys have shown that the age grouping 9 to 14 constitutes nearly 85 percent of the children attending resident camps.

Camp capacity varied from a low of 20 for a private girls camp to a high of 500 for a private boys and girls camp in the North Carolina group. An Arkansas study cites a successful summer camp operator who started out with a capacity of 8 girls and increased by 4 each year until he reached his present capacity of 24. 5/

The average capacity of the 3,646 camps surveyed by the ACA in 1958 was 134. "Opinions of leaders in the camp field on desirable sizes of camp tend to reflect an optimum minimum of 100 or 125 campers and a maximum of 125 to 150 or possibly up to 200." 3/

Recreational program. A rapidly moving full-scheduled program is important. It may cover such activities as horse-back riding, swimming, archery, rifle practice, baseball, tennis, handicrafts, hiking, nature study, and farm work; but some time should also be allowed for letter writing and leisure. Not all activities need to take place at the camp. For example, it might be possible to arrange for swimming at an appointed time in a nearby lake or pool.

In developing camp programs, two questions should be asked:

- "1. Can the subject be taught better in the out-of-doors setting, and
- "2. Is it creative? All the program should be presented so that it recreates, and basically the program should be related to the central theme of living together happily in a natural environment and learning to enjoy the out-of-doors." 8/

Food. Plain, simple food is all that is needed but it must be adequate in amount and nutritionally balanced. American farm women are traditionally the world's best cooks, so little needs to be said about making the meals appetizing.



Since food is the biggest single item of camp expense, this is one place where the camp operator can lose his profits in the garbage can if he isn't careful. A delicate balance needs to be struck here. Overfeeding can mean financial loss, but failure to supply the needs of growing bodies can give the camp a bad reputation.

Facilities needed. Dining facilities and sleeping dormitories or cabins are basic. American Camping Association recommends sleeping units "providing forty or more square feet for each person. Beds should be placed so that heads of sleepers are six feet apart." 4/

Unused dairy barns and other farm buildings can often be remodeled for use as cabins, dormitories, dining rooms, or recreation halls. (See also paragraph, "Capital Investment.")

Layout and construction plans. Assistance should be requested from the Soil Conservation Service in checking the layout plans for feasibility. Soil characteristics are extremely important because of their effect on building foundations, sewage disposal, surface drainage, erosion, and plant cover.

It would be advisable to check also with persons who have built and operated similar camps. Such organizations as 4-H, FFA, farm organizations, church groups and service clubs have built and operated summer camps in most states.

Much of the lumber, and the construction work in general, can be rough finish but it should be durable and attractive.

Drawings for most of the buildings and other facilities required in a summer camp can be procured through the local SCS office. These items are all listed in the first section of this handbook. See also 10/ at end of this chapter.

Liability insurance should be secured to protect against mishaps to guests as well as employees. "A camp operating its own transportation unit should carry adequate liability insurance of \$100,000 per any one person, \$500,000 for two or more persons, or as much below these amounts as it legally approved by State regulations. It is recommended that the camp carry a non-owner policy on all cars which may at any time be used for camp purposes." 4/

Health requirements. American Camping Association recommends:

- A. A physical examination by a licensed physician and a medical history should be required for all staff and campers within one month before they go to camp.
- B. The physical condition of campers and staff should be checked upon arrival at camp by a physician or registered nurse licensed to practice in the state in which the camp is located." 4/

Other health recommendations of the ACA cover inoculations, food service, nutrition, physician on call, first aid, infirmary and health habits. 4/

Sanitation standards must conform with state, county and local laws. Periodic inspections by state or local health authorities are generally required for any establishment serving meals for a charge.

ACA publications on camp standards give rather complete recommendations concerning sanitation.

Even though adequate sanitary facilities are provided, the cooperation of the campers must be secured in order to maintain clean and sanitary conditions in the camp. Posting a few simple rules of sanitation and cleanliness to let the campers know what is expected of them will help greatly in securing their cooperation.

"Proper receptacles should be provided for candy wrappers, soapy wash water, cabin or tent floor sweepings, boxes, and trash of all kinds. This will help induce a sense of tidiness, good citizenship, and pride in personal appearance. Also, such trash leaves a poor picture of camp life in the minds of the campers when they leave." 8/

Safety. If swimming facilities are available at the camp, there should be "a minimum ratio of one person with at least a Senior Life Saving certificate (or its equivalent) per ten swimmers."

"Two or more counselors should accompany groups on out-of-camp trips." 4/ Fire protection and safeguards against electric wiring mishaps should be observed.

#### FINANCIAL CONSIDERATIONS

Capital investment. The Arkansas study showed total investments ranging from \$7,500 to \$43,000. "Investments in furnishings and

equipment, horses, and vehicles ranged from \$6,250 to about \$15,700. Buildings and land made up the remainder of the capital investment." 5/

The following statement was made in 1958 by the ACA: "At this time it would cost between \$125,000 and \$175,000 to construct a camp of 96-camper capacity for summer use only. These figures will generally apply to a camp with the following facilities: A camp developed on the unit plan, with three units of 32 campers each, each unit to have simple cabins, a wash house with flush toilets and a program shelter of permanent construction. The camp would also have a central dining hall and kitchen, central shower facilities, infirmary, administration building, housing for administrative staff and service personnel, and a waterfront on a natural body of water. This cost might be reduced by the use of tents (on platforms) rather than cabins and by using pit privies rather than flush toilets." 3/

Fees to charge range from \$35 to \$70 per week depending upon the quality of facilities and activities offered.

Income and expenses. Total receipts in the Arkansas study "ranged from about \$9,700 to \$17,000."

The following breakdown would generally apply to a private camp, operated for profit: "Food and labor outlays were the largest items in the lists of expenditures. Expenses for food ranged from 15 to 30 percent of the total annual outlays. Labor outlays ranged from 15 to 50 percent of the totals. Horse feed ranged from 5 to 25 percent, and repairs and miscellaneous expenses comprised 10 to 15 percent. Advertising outlays were 5 to 10 percent of the total annual expenses. Expenditures for utilities were 2 to 5 percent and those for taxes and insurance made up 2 to 10 percent of the total annual outlays. Returns to unpaid labor and management averaged 23.9 percent of the gross annual receipts." 5/

Advertising. Roadside signs should plainly mark directions to the camp and can double for advertising purposes.

Listing with a camping association or directory would generally be a good way of contacting customers. Small town or suburban newspaper classified ads, yellow pages of the telephone directory, brochures, radio and TV are among other possibilities for getting a clientele established. Letters directed to various clubs and organizations might secure a group contract. After becoming established, repeat customers and word of mouth may prove adequate.

Lengthening the season. In areas close to hunting territory, camp facilities can generally be used to bring in a substantial amount of extra income by taking hunters during the season. This is especially true if pack or guide service is also available. In certain situations it may be possible to use the camp facilities during the winter season for skiers.



## DAY CAMPS

Many of the suggestions regarding summer camps also apply to day camps. There are, however, certain important differences, such as:

Location. Since the youth must travel to and from home each day, the camp must be fairly close to a population center.

Transportation is generally provided by the camp and included in the overall charge.

Food. A midday meal is served and generally a milk break in midmorning and a juice and cookie break in midafternoon.

Age brackets vary in the range from 4 to 16. Day camps, as a whole, cater to a younger group than summer camps.

Acreage requirements are less than for a summer camp.

Facilities needed. A pavilion for food servings, a recreation room or pavilion, sports fields and playground equipment are basic needs. Other items that may be added include swimming pool, horses or ponies, together with a riding track, archery or rifle range, and fishing pond.

Rates to charge. Five dollars per day is an average charge and includes transportation.



## REFERENCES

- 1 "Camping is Education," 1960 - American Camping Association, Martinsville, Indiana.
- 2 "Camping for American Youth - A Declaration for Action," 1962, American Camping Association.
- 3 "Resident Camps for Children - Present Status and Future Needs." (A report prepared by the American Camping Association, Inc. for the National Park Service, Department of the Interior - 1960.)
- 4 "Resident Camp Standards (as revised in 1960)," ACA.
- 5 "Opportunities for Improving Rural-Family Income Through Recreation Enterprises," by Max F. Jordan. Arkansas Agricultural Experiment Station, Bulletin #673. (May be obtained from FHA National Office on order.)
- 6 Department of Conservation & Development, State Advertising Division, Raleigh, North Carolina. Information Bulletin No. 104 (March 1962).
- 7 "Family Camping Standards (as adopted July 1958)," ACA.
- 8 "Steps to 4-H Camping," by John Lennox. USDA, Federal Extension Service, PA-401.

## OTHER INFORMATION SOURCES

- 9 "Publications and Selected Resources," ACA. This is a rather complete bibliography of publications on camping.
- 10 "Developing Campsites and Facilities," John A. Ledlie, Editor, Association Press, 291 Broadway, New York, New York - 1960 - \$3.50. (May also be obtained through American Camping Association.)



## GOLF FACILITIES

## GENERAL

The discussion here will refer primarily to 9 and 18 hole regulation golf courses. Separate attention, however, is given near the end of the chapter to driving ranges, Par 3 courses and miniature golf.

Demand. "On a nationwide basis the demand for golf courses far exceeds the supply. Not only is the population increasing several millions each year but also the proportion of golfers to total population is increasing. In 1936 it was 16 golfers per thousand population; in 1965 it was 42.\*

"The National Golf Foundation predicts there will be 10 million golfers in the nation by 1970; its goal for courses by 1970 is 10,000. It seems a long range boom in golf course development sustained by massive population growth and swinging enthusiasm for the game."

Supply. The following table shows the number of golf courses in the U.S. in 1964:

	<u>9 hole</u>	<u>18 hole</u>	<u>Total</u>
Regulation	3,825	3,287	7,112
Par 3	572	209	<u>781</u>
		Total	7,893

## ASSESSING THE FEASIBILITY

NGF suggests that for a course that is to depend on daily fees for its operation and repayment, a study should be made of the "population within a 10 mile radius; a 20 mile radius; population increases over the past two decades (nationwide it was about 36%); number of daily fee type golf courses now in operation within the 10 mile radius and 20 mile radius; have there been any failures in recent years? An acceptable yardstick for daily fee type courses is one 18 hole operation for each 25,000 people." Each additional 18 hole course in the area should have an additional 35,000 population from which to draw.

"What is the length of the playing season in the area? (A factor which will affect annual income and maintenance costs materially.)" (See Chapter 12, Winter Sports Areas, for other types of recreation that may be worked in conjunction with golf to increase use of the facilities.)

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\* All quotations on golf are from publications of the National Golf Foundation.

The feasibility tests on membership type clubs would be somewhat different. In the final analysis, feasibility would be determined by whether or not it was possible to sign up enough members to assure the payment of operating expenses and annual repayments on capital investment. Under FHA terms this means a membership of around 100-200 for a 9 hole course and 200-400 for an 18 hole course.

## LAND

### Acreage needed. NGF says:

for a 9 hole course - 50 to 80 acres  
for an 18 hole course - 110 to 160 acres

Type of land. "Rolling terrain, creek valleys, woodlands, ravines and ponds make the job of designing an interesting golf course much easier. Also, is there sufficient north and south yardage to eliminate holes facing into the sun?

"A golf course should, if possible, have patches of woodlands, as trees offer one of the best natural hazards if properly placed. It is costly, however, to remove large growing trees from those portions of the site which will be fairways in the final run...likewise a stone removal program can be expensive.

"Soil factors are extremely important. The ideal golf course soil is a sandy loam. The better the stand of turf raised on fairways and greens, the more satisfactory and more popular will be the course." SCS representatives should always be consulted on soils aspects of the prospective golf course.

Location. "Accessibility is important. Unless absolutely unavoidable, a golf course should not be off the beaten track. All other things being equal, design the course so one or two holes parallel the highway -- it is good advertising.

"Electric power, an ample and economical water supply and proper drainage conditions are essential to the successful operation of a golf course."

Option. Tie up the proposed site for a long enough period to permit adequate feasibility studies and submission and approval of the loan application. Six months isn't too long an option. It can always be released before expiration if it is decided early that the land is unsuited.

## STEPS IN PLANNING

National Golf Foundation's book, "Planning Information for Private Golf Clubs," has valuable information on planning a course. (See references at end of this chapter.)



The NGF is a nonprofit association sponsored by major manufacturers of golf products. It has staff consultants in the field who are available on request. The name and address of the nearest staff consultant can be obtained by writing or calling the National Golf Foundation. (For address see "References" at end of this chapter.)

A golf architect is desirable if the cost isn't out of reason. The NGF book referred to above contains a list of golf course architects.

"In selecting the architect assure yourself that he is experienced and that his past performance has demonstrated his ability to properly handle all the problems that may be encountered. Learn what courses he has built, visit some of them to gain first-hand information of his work, then enter into a written agreement to avoid misunderstandings in specifications for the course itself, costs, terms and other details."

Like many other commodities and services the highest priced golf course architect is not necessarily the best. In one area a highly respected architect is charging \$1,600 for designing 9 hole courses and \$3,600 for 18 hole developments. In the same area another was designing an 18 hole course for \$6,000 although he claimed his minimum fee was \$20,000. The rates will vary somewhat according to what is encompassed but in general shouldn't fluctuate greatly on either side of 6 percent.

Some courses in thinly populated rural areas where the costs had to be watched very closely have managed to draw on local golf professionals or amateur golfers to design their course free or in return for a membership.

It is wise to keep the clubhouse modest. The tendency of many golf clubs is to want to spend an undue proportion of the total investment in building a luxurious clubhouse with eating and drinking facilities. The expectations are that profits from these facilities will pay off the clubhouse. After the first enthusiasm, however, interest in the evening activities frequently wanes. Anticipated usage should be based primarily on the playing facilities.

Swimming pool. This is a good drawing card to get and hold families to membership in the club. A discussion on swimming pools is covered in a later chapter.

Tennis courts should be included if at all possible. The cost of two courts with flood lights generally runs around \$5,000-\$6,000.

## FINANCIAL ASPECTS

Capital outlays. NGF states: "Costs will vary widely depending on such items as size and quality of greens and tees, type of construction of the course itself and type of irrigation system used. Construction costs for a 9 hole regulation course (not including land costs) may range anywhere from \$40,000 to \$150,000; for an 18 hole course \$75,000 to \$350,000 or more. Do-it-yourself 9 hole layouts have at times been built for as little as \$25,000 but this is an exception to the general rule.

"Before proceeding with a golf venture it is essential that detailed cost estimates on all phases of the project be obtained. Often key items which may increase costs materially are overlooked."

FHA loans to individuals for 9 hole golf courses as of March 1, 1965, averaged \$2,392 per hole. This didn't include the cost of land because it involved farmers who already owned their land.

Loans to associations averaged \$8,037 per hole for 9 hole courses and \$11,312 per hole for 18 hole courses. Nearly all association loans include cost of land and clubhouse. Most 18 hole and some 9 hole courses also include a swimming pool and tennis courts. These figures do not, however, represent the total cost of development because the local people always put in some of their own funds.

SAMPLE CAPITAL EXPENDITURES BUDGET FOR A 9-HOLE COURSE

PROPOSED METHODS OF FINANCING AND COST ESTIMATES

	<u>FHA Funds</u>	<u>Applicant Funds</u>
1. Purchase of land (55.2 acres)	\$20,000	
2. Refinancing 15.5 acre park	7,800	
3. Construction costs		
(a) Construct 9 greens	12,066	
(b) Construct 9 tees	3,065	
(c) Construct fairways	4,330	
(d) Develop water system	7,000	
(e) Construct 2 tennis courts	3,705	
(f) Construct 20' x 40' clubhouse	8,000	
(g) Cost of maintenance equipment		\$7,412
(h) Miscellaneous	1,000	
(i) Shelters	300	
(j) Equipment building 20' x 40'	2,000	
(k) Liability insurance		400
(l) Property insurance		100
(m) County taxes (non-transferable)		
4. Engineering fee	2,000	
5. Legal fee	600	
6. Interest during construction	3,500	
7. Administrative costs (advertising, printing, postage, telephone)		400
8. Contingencies	5,588	
Total cost	\$89,266	
Less contribution	<u>10,000</u>	<u>\$8,312</u>
	\$79,266	

SAMPLE BUDGET FOR MAINTENANCE EQUIPMENT FOR A GOLF COURSE (9 HOLES)

1 tractor	\$1700.00
1 5-gang fairway mower	1740.00
2 green mowers @ \$425	850.00
1 72" tow type rotary mower rough cut	647.00
1 36" top dressing spreader	164.50
1 36" fertilizer spreader	75.00
2 Steel Drag. Mat. @ \$14	28.00
1 Verti Cut machine	555.00
1 #10 Royer Shredder	435.00
2 Ball Washers @ \$23	46.00
1 4" Turf Plugger	10.50
1 Cup lifter	7.50
1 36" rake	10.98
1 Cup setter	5.20
1 Cup setter	10.75
1 set (9) practice green markers	21.60
18 tee markers	10.80
9 putting cups @ \$3.50	36.50
1 set flags (9)	9.95
9 flag poles @ \$3.65	32.85
1 4-wheel trailer	150.00
1 Aerifier	565.00
Miscellaneous, small tools, wheelbarrow	<u>300.00</u>
	\$7412.13

Management. The size of the course and the number of members will determine the type of arrangements that are made for management. Some of the smaller courses have been able to secure a combination manager-pro who looks after the buildings and grounds for a guaranteed salary of perhaps \$150 to \$300 per month, plus whatever additional income he is able to derive from lessons and sale of merchandise.

Any group should be wary of planning a course that cannot afford to maintain a full time manager-pro at least, plus whatever part time labor is needed to look after the grounds. Sometimes the type of person mentioned can be secured at the outset and he can plan the course and supervise construction.

The cost of labor in a given area will have a decided influence on the total golf course maintenance cost inasmuch as about two thirds of the cost of maintenance usually goes for salaries of the golf course superintendent, foreman and laborers. A recent study of the operations of 50 country clubs (nationwide sampling) made by a leading accounting firm reveals that maintenance costs per hole averaged \$3,505. Of this \$2,244 represented cash payrolls.

A sample list of operation and maintenance costs of a golf course association loan is given here. This may or may not be typical but is given primarily for its value as a check list of items.

18-HOLE GOLF COURSE  
ESTIMATED OPERATING COSTS DURING AND THREE YEARS AFTER CONSTRUCTION

<u>Operation and Maintenance</u>	<u>Const. Year</u>	<u>1st Year</u>	<u>2nd Year</u>	<u>3rd Year</u>
Pro Salary	\$ 3,000	\$ 5,000	\$ 5,000	\$ 5,000
Greens Keeper Labor (2)	5,000	5,000	5,000	5,000
Heat and Lights	1,000	1,500	1,500	1,500
Telephone	150	150	150	150
Gas and Oil	500	1,000	1,000	1,000
Maintenance of Equipment	200	300	400	2,000
Fertilizer, Seed, Chemicals	400	800	1,000	1,200
Lifeguard (pool)	500	750	750	750
Legal and Auditing	200	500	750	750
Property Taxes	400	1,200	1,200	1,200
Excise Taxes	5,250	6,000	6,750	7,500
Property Insurance	800	2,000	2,000	2,000
Pool Supplies	300	800	800	800
Other Insurance and Taxes	100	200	200	200
Maintenance Buildings and Grounds	0	100	400	800
Clerical Expenses	50	200	400	400
TOTAL	\$17,850	\$25,500	\$27,300	\$30,250



## GOLF DRIVING RANGES

A driving range can be an independent establishment. If so, it should be along a well traveled highway on the outskirts of a sizeable population center, or it can be affiliated with a golf course. In either case it should be self supporting on a fee basis.

Herewith are some recommendations regarding driving ranges:

Size. A golf driving range accommodating 35 patrons at one time should measure not less than 200 yards in width and 300 yards in depth. This amounts to about 12.5 acres.

Fees. Fees are charged at the rate of so much for a bucket of balls, for example:

\$\$.75 per bucket of 30 balls.

\$1.50 per bucket of 65 balls.

Orientation. "Whenever possible the golf driving range should face due north to keep to a minimum the possibility of players driving into the sun. A range should never face south or west if this can possibly be avoided."

Slope. An ideal site is where the fairway slopes downward from the back of the range to the tee line, with no sharp undulations to complicate mowing or ball retrieving operations.

Land. Land should be well drained, fine, sandy loam that can produce a good stand of turf.

Clubs. A 35 tee range will need about 70 wood clubs.

Balls. A 35 tee range will need at least 4,000 balls.

Other equipment. A mechanical ball picker - upper machine and golf ball washers.

Area should be attractive and neat.

Safety cautions should be posted.

Rubber or brush tees can be used. These save the turf.

Minimum of 10 feet should separate each tee.

Restraining rail should be provided approximately 10 feet behind each tee.

Distance signs showing yardage should be located 100 to 250 yards at 50 yard intervals.

Lights are a must for an income-producing range because a high percentage of use will be at night.

### PAR 3 GOLF

NGF reports a growth in Par 3 courses from 100 in 1956 to 781 in 1964. "This increasing popularity is attributable to several factors including the crowded conditions on most regulation length courses, the shorter playing time on a Par 3 permitting more golfers to play after work, lighting the courses for night play, the appeal of this type of course to women and youngsters, the growing scarcity of land near heavily populated areas and rising land costs which sometimes economically prohibit a regulation course, lower construction and maintenance costs than a regulation course plus the fact that more and more golfers find this an excellent means of improving their game and they enjoy playing these courses."

Following are some recommendations regarding Par 3 courses:

Land - 15 to 30 acres for 9 hole courses.  
25 to 80 acres for 18 hole courses.

Cost - not including land - \$2,000 per hole minimum.

Time - 45 minutes for 9 holes of play. Can be lighted for night play.

Supervision - entire course visible from one point.

Learning - all elements to teach golf are present. Basic phases of game are stressed - pitching and putting.

Age - excellent for older and handicapped people.

Green fees - 9 hole - \$.75 to \$1.50.  
18 hole - \$1.25 to \$2.00.

### MINIATURE GOLF

This game hit boom dimensions in the 1930's and then almost died out with World War II and after. In recent years it has started to come back slowly. Such courses should be designed and engineered by an expert, according to present standards.

Some recommendations are:

Area - 10,000 square feet for an 18 hole course.

Cost - \$10,000 minimum - \$25,000 average.

Maintenance cost - low. Few hours daily, mostly at night. One person can operate.

Customers - both sexes, all ages.

Fees - 50¢ for 18 hole course.

Balls - could get by with 100 balls for an 18 hole course but should have 200.

Clubs - 100 to 150 putters for 18 hole course.

Possible income - "A miniature course ordinarily receives its heaviest play during the evening hours. Most operators estimate that capacity or near-capacity business is drawn between 6 and 10 p.m. An 18 hole course can accommodate 18 foursomes at one time and the average 18 hole layout requires from 30 to 45 minutes to play. Playing fees vary but they average 50¢ a round for adults. Thus, the revenue potential for an 18 hole course during 4 hours of any evening in which capacity play may be expected can run as high as \$200."

Construction - prefab courses are available now.

#### REFERENCES

National Golf Foundation, Room 804 Merchandise Mart, Chicago, Illinois 60654, Telephone: 312-527-3564 has the following materials available to assist in planning and building golf courses:

Planning and Building the Course. Price \$1.

Planning the Golf Clubhouse. Price \$9.

Golf Clubhouse Planning and Evaluating Checklist. Free.

Planning Information for Private Golf Clubs. \$7.50.

Operating Statistics on Private Golf Clubs. Free.

The Municipal Golf Course Organizing and Operating Guide.  
Price \$3.

Golf Operators Handbook. Price \$3. (Miniature, driving ranges, and Par 3)

Planning Golf Events. Price 50¢.

Golf for Industry Includes Golf League Planning. Price \$1.50.

Community Planning Gets a Golf Course. (A 22 minute, 35mm color sound slide film, available on loan or purchase)





## CHAPTER 4

### MARINAS

#### GENERAL

This category of recreation includes such enterprises are:

Docking space rentals	Other:
Off-season storage	Launching ramps
Rentals of:	Mechanical repairs
Paddle boats	Gasoline and oil sales
Rowboats	Eating places
Outboard motors	

#### DOCKING SPACE RENTALS

This is a category of increasing importance in the field of recreation.

A survey of waterfront facilities in Arkansas in 1962 showed that "The nature of the boat dock business on the larger lakes is changing from a rental of establishment-owned boats to the servicing and storage of privately owned craft. This shift necessitates the conversion of some of the operating equipment inventory into docks, stalls, boat washing facilities, etc." 1/

"Wood, aluminum and steel are all popular materials from which piers are made, and there are some excellent ones constructed of two and even three of these materials in combination." 2/

Wood piers are the least expensive. They are durable if properly constructed and given proper maintenance. Steel piers are strongest but require careful maintenance; they cost as much as aluminum. Aluminum piers are expensive but durable, light in weight and easily maintained. They cannot be used in salt water.

Floating piers are recommended where water levels vary. These are anchored to the shore and held in place by piles. Materials generally used to float piers are wood, oil drums, or plastic foam. 2/

"Storage rates on stalls were approximately \$1 per night, \$10 per month, and \$100 per year." 1/

Some farmers have converted unused barns and sheds into dry storage space for boats. Charges run around \$10 per month.

## EQUIPMENT RENTALS

"... boat rental facilities not associated with other facilities should be located near a populous area or readily accessible to a heavily traveled road. People do not ordinarily come to these places just to use the boats--other activities have attracted them." 3/

Paddle boats (operated by bicycle-type pedals) are an exception to the last sentence above. Couples enjoy pedaling these boats around on the water as a recreation in itself. They cost around \$250 and are generally rented for about \$1 per half hour.

Rowboats of the traditional kind cost around \$150 and can be rented for 50¢ to \$1 per hour, or \$2 to \$3 per day.

Outboard motors rent for "\$4-\$5 per day for small motors up to \$10 per day plus fuel for the 18-hp size." 1/

## OTHER

Launching ramps are a necessity at most waterfront facilities on bodies of water large enough for motor boats. Charges for their use run from 50¢ to \$1. They can be a drawing card for other services and supplies such as mechanical repairs, gas and oil and restaurants.

Ski doodler. An advertisement in the January 1965 issue of Camping Magazine pictures a contraption which looks like an over-sized playground carousel set in the water for towing water skiers. Sidelines like this could offer supplementary income to a waterfront facility.

## REFERENCES

- 1 "Opportunities for Improving Rural-Family Income Through Recreation Enterprises," Bulletin 673, Max F. Jordan. Agricultural Experiment Station, University of Arkansas, Division of Agriculture, Fayetteville, Arkansas in cooperation with Resource Development Economics Division, Economic Research Service, USDA. June 1963.
- 2 "Planning Waterfront Facilities," Camping Magazine, Milton K. Berlye. September/October 1965. Published by American Camping Association, Martinsville, Indiana 46151. Price \$6 per year.
- 3 "Private Outdoor Recreation Facilities in Rural Areas of Western Oregon," Special Report 173, O. Wendell Holmes, Jr. Agricultural Experiment Station, Oregon State University, Corvallis, in cooperation with Resource Development Economics Division, Economic Research Service, USDA. April 1964.

## CHAPTER 5

### SWIMMING FACILITIES

#### GENERAL

Projections made by the Outdoor Recreation Resources Review Commission indicate that by the year 2000 swimming will be the most popular of all outdoor recreational activities.

Private swimming pools in America jumped from 2,500 in 1948 to 124,900 in 1959. An article in "Swimming Pool Age" estimated that 70,000 private pools would be built in 1963.

Swimming pools in rural areas might be divided into two general classes:

Primary or complementary. This class of pool would be fairly large such as a municipal pool or a pool in connection with a golf club or a picnicking and sports center.

Supplementary. This class would be small pools developed as an added attraction for a vacation farm, camping area or youth camp.

Other items to be considered are:

Natural swimming areas present entirely different problems than constructed pools and will be discussed separately.

Covered swimming pools can lengthen the season and may thereby justify the added cost.

#### PRIMARY OR COMPLIMENTARY FACILITIES

Where a pool is to be the primary attraction or of near equal importance with other forms of recreation in a development, it will require some careful estimating. In determining the size of pool needed calculations should be made from several points of view and the results compared with the experience of other towns or clubs having similar conditions.

Estimating prospective use. "A study by Iowa State College has shown that the size of the city has considerable influence on the proportion of the total population which will attend the pool. The smaller the community, the larger

the proportion which will use the pool. The study indicated that for cities under 30,000, maximum daily attendance will be between 5 and 10 percent of the population. Another rule is to consider the average daily attendance as 2 to 3 percent of the population . . . . Maximum attendance at any one time seems to be about one-third the daily attendance . . . ." 2/

Determining size of pool. "It must not be so large as to be wasteful of water or space under ordinary conditions, or to appear poorly patronized. It is better to have the pool too crowded a few times each season than to have it so large that operating costs are excessive." 2/

"The maximum number of persons in bathing attire within the enclosure or the bathing area should not exceed one person per 20 sq. ft. of pool and deck area combined." 3/ "Total fenced-in area - excluding bathhouse - should be two-thirds deck and one-third water." 4/

"Walks should be continuous around the pool with a minimum width of 8 ft. . . . ." 3/

One designer estimates, for example, a municipal pool 30 ft. by 60 ft., plus a wading pool for a population of 30,000. This size would also be adequate for most country clubs with up to 1,000 members in rural areas. If swimming meets are not to be considered, a 20 ft. by 40 ft. pool will be adequate for most country clubs. A check on these estimates might be made by using the figures in Table I in the first chapter of this handbook.

Closed membership clubs in compact areas have greater participation than municipal or general admission or country club pools and allow approximately 12 sq. ft. of pool area per member family.

In determining size of pool, other factors to be considered are:

- A. Water volume and treatment. ". . . the total number of bathers using a pool during any period shall not exceed 20 persons for each 1,000 gallons of clean water added during the period. Where the addition of disinfectant is not continuous during the bathing period, the total number of persons using the pool between disinfections should not exceed 7 for each 1,000 gallons of water in the pool." 2/ (One cubic foot holds 7.48 gallons.)



Depth of water - 3 ft. at shallow end to 10 or 11 ft. at diving end (with additional 18 to 30 inches between surface of water and deck).

- B. AAU and NCAA standards. "Swimming meets of some kind will be held in practically all but private pools, even though they are not originally contemplated. Therefore, such meets should be given some consideration in the design.

Olympic size pools need to be  $82\frac{1}{2}$  ft. long, but "The national and international organizations controlling swimming meets and records are quite liberal in the specifications for the length and width of pools.

"Three sets of records are recognized. One set is for pools 60 ft. to 75 ft. in length; another for pools 75 ft. to 150 ft.; and a third for pools more than 150 ft. in length." 2/

"The width should provide at least four racing lanes having a minimum width of 6 ft." 2/

Construction. Pools should be constructed by a reliable contractor who will have access to detailed construction requirements and state and local sanitary and safety regulations. No individual or association should attempt to make a final decision to construct a pool without making a detailed study of one or all of references 1, 2, and 3 in the attached list.

A good figure to use in making a rough estimate of the costs is \$10 per sq. ft. of surface area of the pool, plus \$2 per sq. ft. of deck area including the fence. Bathhouse costs will generally run about half the cost of the pool itself.

Revenues and expenses. "In determining the charges, special consideration should always be given to children. Interesting them in swimming will increase general interest in the pool and will also build future patronage. During the morning, at least, children should be admitted free or for a very nominal fee." 2/

Charges range:

Adults per visit	\$\$.40 to \$1.00
Child per visit	\$.25 to \$.50

Sometimes separate charges are made for bathhouse services, such as:

Basket service	\$.05 to \$.25
Locker	\$.10

Closed membership swimming clubs in compact areas generally have a membership charge of \$200 to \$300 per family, represented by stock, plus \$20 to \$40 dues per year per family.

Dues charges or admission fees will have to be set high enough to cover expenses of operation plus a debt repayment or a depreciation fund or capital improvement expenses.

Minimum personnel will generally include a manager, custodian and four lifeguards. Annual operating budget for a minimum size pool by itself will generally run in the neighborhood of \$10,000 to \$20,000.

The length of the swimming season is usually from June 1 to September 15. Some areas in Florida, California and Texas have longer operations. The average pool has 100 days of possible use with about 85 days of actual operation.

Safety precautions. Every swimming pool should be equipped for safety and rescue with:

- A. One or more light but strong poles (bamboo or other) with blunted ends not less than 12 feet in length, for making reaching assists or rescues.
- B. One or more throwing ring buoys not more than 15 inches in diameter, having 60 feet of 3/16 inch manila line attached, placed on racks at strategic points adjacent to the pool.
- C. Every swimming pool should be equipped with a standard 24-unit First Aid kit which should be kept filled and readily accessible for emergency use.
- D. Every swimming pool should have a readily accessible room or area designated and equipped for emergency care of casualties. Minimum equipment for the emergency room should be the First Aid kit previously suggested, and a stretcher and two woolen blankets, for emergency use only.
- E. Every swimming pool should provide, immediately adjacent to its telephone, a selected list of telephone numbers for (a) nearest available doctors, (b) nearest available ambulance service, (c) nearest available hospital or hospitals, and (d) nearest available police or fire department rescue squads. 1/

Sanitation. "The construction and operation of a modern swimming pool is a sanitary engineering problem. The design and equipment should be, and in many states must be, approved by the local and state health officials before construction is started." 2/

### SUPPLEMENTARY FACILITIES

Swimming pools are often desirable as an added attraction to a vacation farm, or youth camp or a camping area. Pools of this type can be constructed rather quickly by contractors specialized in the business, using the shotcrete (Gunitite) process. This method does not require the use of forms. The excavated area is lined with reinforcing rods and a mixture of cement; sand and water is applied by compressed air. "Its use is limited to soils which can be shaped to the desired contour and which will retain this shape until the shotcrete is placed. Under these conditions the construction is quite satisfactory and economical." 2/

Contract prices range from \$4,000 up for pools (35 ft. long) without diving boards. This price includes filter and recirculating pump but does not cover landscaping, sodding or fencing. Pools where a diving board is to be used must be considerably deeper at one end and contract prices start at around \$5,000.

Pools have been constructed by some farmers for as little as \$1,500, using kits containing circulating pump and filter together with a plastic liner and using their own labor.

A farmer could no doubt reduce the contract price some by doing his own excavating. The pool must be enclosed with a fence that will keep toddlers from wandering into it, particularly if the vacationing families will include small children.

The average residential-size pool will require 12,000 to 15,000 gallons of water to fill it. Thereafter, if a recirculating type filter and treatment plant is used, the only additional water needed would be that lost by splashing and evaporation.

Materials other than concrete are being promoted by some companies selling swimming pools. So far we do not have enough information to advise on the practicability of these pools.

Swimming areas in ponds, lakes, streams, and tidal waters.  
The situations are so diverse in this category that persons contemplating the development of any such bathing facilities should make a study of Item 1/ in the attached list of reference materials, particularly that section headed "Outdoor Bathing Places," pages 44-56.

A survey should be made of the possibility of contamination of the water.



"Waters showing a concentration of most probable numbers of coliform organisms of less than approximately 1,000 per 100 ml are considered in most such areas to be fairly acceptable for bathing unless the sanitary survey discloses immediate dangers from human sewage pollution; however, it must be admitted that bathing beaches where the content of coliform organisms runs as high as 2,400 per 100 ml on the basis of most probable numbers, or sometimes even higher, have been used without reported evidence of illness, and this limit of 2,400 per 100 ml is still employed as a criterion of acceptability in some states." 1/

Sanitary appurtenances should be provided at these places although arrangements will vary widely with individual situations.

Safety precautions are important here as in constructed pools. Ropes or other markers should be set up to mark the limits of safe swimming.

Special attention should be given to proper safety measures in connection with electrical lines or outlets.

#### COVERED POOLS

Shortness of season is always a problem when it comes to judging the economic feasibility of a swimming pool. In the larger pools it may be worth considering the possibility of lengthening the season by erecting some sort of enclosure over the pool and heating the inside air.

"Lightweight enclosures for use over pools are steadily selling themselves in the fields of public, semi-public and special-purpose pools as owners and operators of such installations find that cold weather swimming has a growing appeal.

"While price remains a limiting factor, the lightweight enclosures often are found to represent a satisfactory compromise between permanent housing, costly sliding or swinging wall arrangements, and the disadvantages of having no use of a pool at all for seven to eight months of the year.

". . . an enclosure may cost from one-half to three-fourths as much as the pool itself."

Choices are between two general types of pool enclosures: "the air-supported 'bubble,' or the rigid type which usually employs an aluminum frame covered with panes of plastic or glass." 6/



#### REFERENCES

- 1 "Recommended Practice for Design, Equipment, and Operation of Swimming Pools and Other Public Bathing Places - Tenth Edition." Published by the American Public Health Association, Inc., 1790 Broadway, New York, New York. Price \$1.25.
- 2 "Concrete Swimming Pools." Published by Portland Cement Association, 33 West Grand Avenue, Chicago, Illinois.
- 3 "Minimum Standards for Public and Semi-Public Pools." Published by the National Swimming Pool Institute, Harvard, Illinois.
- 4 "Design Problems of Large Pools," by Lloyd S. Hubbard, L. S. Hubbard and Associates, Pool Consultants, in June 1963 issue of "Swimming Pool Age." Published by Hoffman-Harris, Inc., 425 Park Avenue South, New York, New York. Price \$.50 per copy, \$5 per year.
- 5 "Make Your Farm Pond Safe." USDA Soil Conservation Service, PA-396.
- 6 "Enclosures Up Pool Owners Profits," by Henry Kinney. "Swimming Pool Age," August 1964.



## CHAPTER 6

### PICNICKING AND SPORTS AREAS

#### GENERAL

In localities where public picnic and sports areas are inadequate, development of such facilities may bring added income from otherwise idle land. This land could be a wood lot or a meadow around a pond.

Trees or water - preferably both - would be a requisite for such an area.

Control of insects and litter is imperative.

#### ROADSIDE PICNIC AREAS

Farmers with land along a heavily tourist traveled highway could set up picnic tables and charge 50¢ to \$1 per car. (Even where free roadside picnic tables are available they are generally so littered and overcrowded that travelers would be willing to pay for clean facilities.) If the area is some distance from the house one could use the honor system for collecting fees.

Such an area would need only a picnic table and a garbage can at each cleared spot. Units should be at least thirty feet apart and have space to park the car near the table. Expenses would need to be kept low because the income would be limited.

#### PICNIC AND SPORTS AREAS

In the areas adjacent to population centers families and organizations are looking for picnic places during seasons when the weather is favorable.

A development to meet this type of demand should have individual picnic tables with fireplaces as well as clusters of tables with fireplaces. It should have a pavilion for shelter from the rain. Drinking water should be available. There should be comfort stations and receptacles for garbage and trash disposal. Well-laid-out parking areas should be provided for groups.

The number and types of sports areas depend upon the resources available and the demand. They may include swimming, boating, fishing, baseball, softball, tennis, volleyball, horse shoes, croquet and shuffleboard.

This type of development may lead to the addition of a refreshment stand or a stand for the sale of farm products. Some farmers have added barbecueing. This may turn out to be the drawing card for organization picnics.

Construction plans for facilities and lay-out designs for playing fields are listed in the appendix. The drawings can be obtained through the Soil Conservation Service. Costs of construction will vary greatly according to the size of the facilities and the materials used.

Charges may be made per head or per car. One farmer charges 25¢ per person or \$1 per car. For an organization that wants to reserve his open-air pavilion, he charges \$25.

#### REFERENCES

- 1 "Rural Recreation Enterprises for Profit," Agriculture Information Bulletin No. 277, USDA. October 1963.



## CHAPTER 7

### CAMPING AREAS

#### GENERAL

Camping is one of the most popular outdoor recreation activities of modern Americans and it is increasing tremendously. Public camping areas are often overcrowded and this has given rise to income-producing private campgrounds.

Campers' desires vary widely. "Some prefer to be surrounded by home conveniences and the society and security of other people. Other campers pack their equipment across miles of rugged country in search of solitude and the experience of roughing it in truly wild surroundings." 1/

The equipment campers use varies all the way from tents to camping trailers to pick-up coaches to rather elaborate travel trailers with their own kitchen, bathroom and sleeping facilities.

One thing is generally true about campers - they do it more for the outdoor experience than for saving money. Because most of them want a little privacy and some personal service they are willing to pay a little higher fee for a campsite that gives them these amenities. This is why private campgrounds are in business despite the fact that public campgrounds are fairly plentiful in some areas.

While most campers want some privacy, very few want isolation. A study in northeast Pennsylvania showed that "two-thirds of the campers wanted to be within 50 to 100 feet of other campers. Most of the remaining one-third preferred to be 250 to 400 feet from other campers, but a small number wanted campsites 10 to 15 feet apart." 1/ For this reason it is desirable to arrange most of the campsites in clusters of 6 to 8 but also provide a few solitary sites for those wanting isolation. Even the clusters should have some underbrush for screening between the individual sites.

Separate areas are desirable for those with tents and those with trailers although both groups can use the same central utility buildings. SCS should be called in at the beginning to examine soils both from standpoint of wear and sewage disposal.

The best source of information on building and operating a campground, according to C. R. Sandy, President, Campground Association of Pennsylvania is "Go camping yourself. Maybe you have been camping for years, but that was for pleasure. Now, you should go, with the prime purpose of gaining information on campground operation. Go armed with camera and notebook. Visit all the private campgrounds

you can. Ask questions of the owners. Take pictures of the campgrounds you visit. Take notes on all you see that impresses you. There will be many items that you will not like; make a note of these also. Talk to the owners about advertising, camper relations, fee charged, investment required, etc. . . . . Take particular notice on what makes a successful campground. What do these successful owners provide that draws the campers to them; or is it something in the area that is the attraction?

"Must a campground pass a state inspection before it can open?"

"Yes, consult with your local State Health Department Sanitarian."

### TRAVEL TRAILERS

The number of travel trailers and pickup campers is increasing in great numbers each year. Many of these are people who have graduated from tent camping. The Mobile Home Manufacturers Association has gathered some statistics showing some of the characteristics of travel trailer owners. Their survey "showed 31% had incomes over \$10,000 and 64% incomes over \$7,500 including those retired, 45% had no children in the home, and 38% had children over six years old only." 2/ In 1964 the MHMA estimated there were 400,000 travel trailers in use.

"Dependent" trailers have sleeping and kitchen facilities only; "independent" contain full bathroom equipment in addition. Of the latter group many are "self-contained," which indicates they can be used for several days without benefit of outside hookups.

A survey of travel trailer sales taken in 1961 showed:

4/5 were equipped with water tanks,  
2/3 were equipped with toilets,  
1/2 were equipped with intermediate waste holding tanks. 2/

By September 1965, there were 1,133 sanitary stations for travel trailer sewage disposal. This is a long stride from only one installation three years ago. Hawaii and Rhode Island are the only states that do not have any yet. Many are located at gasoline stations, National and State parks, travel trailer dealers, etc. MHMA prints a list of these stations which is available for 25¢.

Travel trailer owners have formed clubs in many states. They frequently rendezvous at selected camps for week end outings providing a flurry of business for the campground owner able to accommodate them.

\* \* \* \* \*

Camping areas tend to divide into two basic types: overnight and destination. The overnight area is a simpler one, located along or near a main highway, where campers stop overnight on the way to some other destination. The destination type camping area is located at or near a scenic or historical area, or near fishing, hunting, boating, swimming, skiing or other outdoor recreational facilities." 2/ A further subdivision of the latter type might be "week end" and "vacation."

#### OVERNIGHT CAMPING AREAS

Location is the most important ingredient in this type of facility. It must be near a heavily tourist traveled highway. If it is a limited access expressway or toll road it should be within two miles of an interchange and located on a road leading to the interchange. If relative to a standard highway, it should be located immediately adjacent to such main, well traveled road, set back far enough so that highway noises are reduced.

"If you are considering building such an overnight facility, contact your State Highway Department (even if the road is a Federal highway) or Toll Road Commission to obtain a traffic count to help determine if an . . . overnight camping area will be profitable. Determine the location, size and quality of the nearest 'overnight'. . . 'parking facility.'" 2/

Resources. A place to park for the night is the main consideration. If trees and a body of water are available, this is an added attraction. In the plains country a shelter belt or a small water impoundment could be an attraction. If business looks promising after a few years the owner may want to add a swimming pool.

Facilities. A central utility building with toilets and showers should be provided. In some cases it may be possible to convert a barn or shed to this use if it is made neat and clean.

A dumping station for self-contained trailers is desirable unless one is available at a nearby location.

If demand warrants, the owner may find it desirable to install sewer and water risers for a few individual sites.

Water risers and electrical outlets should be made available at each cluster of sites.

"Since approximately 4/5 of the travel trailers have water tanks, then 4/5 have a kitchen sink requiring drainage. The cost of providing these facilities must be balanced against the projected income from them. In most areas you can expect only about a four months' season." 2/



MHMA makes the following additional suggestions regarding overnight trailer parking areas:

- A. "Drive-through spaces are usually preferred to back-in spaces.
- B. "Coin operated laundry machines and many types of vending machines can provide an important extra income as well as furnish a service appreciated by your tenants.
- C. "Garbage cans should be placed at intervals throughout the park . . . close enough to all spaces to encourage their use.
- D. ". . . be sure that each tenant is supplied with a business card or picture post card with your name and address -- trailerists like to refer good stops to their friends." 2/

Overnight customers become accustomed to doing their grocery shopping on the road because very few overnight parks have such facilities. However, the campers can be a good market for home produced products such as home cured meats, milk, honey, vegetables and fruits in season and even handicraft items.

Capital investment. A central utility building with septic tank and disposal field will cost anywhere from \$2,500 to \$5,000. Road construction and campsite clearing will run \$200 to \$400 per unit. One should have a minimum of 20 units to make the enterprise worthwhile. Therefore, a 20 unit camping area would cost \$6,500 to \$13,000, not counting the value of the land. An Oregon study showed the average camping area used 15 acres. 3/

Charges. Most charges range between \$1 and \$3 per night, depending on the facilities offered. Some charge 25¢ for each additional person over 4 in the group. Additional charges over the basic rate are generally made for certain services such as sewer riser 50¢, and electric hookup 50¢. Sometimes there is an additional charge for swimming or fishing if available, but these items are often considered as an added attraction without charge.

Expenses. The cost of operating a campground is not great. It is mostly labor in registering guests and keeping the place cleaned up. In many cases the honor system can be used to conserve labor. The only other expenses of significance are electricity, advertising, and repairs to equipment. Rules posted in prominent places will let the guests know what is expected of them and can mean a saving in clean up labor and repairing costs.



Advertising. A listing of the facility should be made in all the travel guide books (see list at end of this chapter). Filling stations in the area should be contacted and supplied with literature. Word-of-mouth is one of the best ways of spreading the news of a good camping area. Campers are clubby and like to let their friends know about desirable new places they have discovered -- hence the MHMA recommendation No. 4 quoted under "Facilities."

Certain area-wide or nationwide organizations or chains of overnight campground areas have sprung up in recent years. These are generally set up on a franchise basis. The parent organization furnishes standardized plans and advertising material. Some of these are looking particularly for farmers who are interested in a campground operation as a sideline to their farming. This might be an excellent way to secure effective advertising if the charges for the parent organization's services are not too great and their legal contracts are not so binding as to make it impossible for the farmer to secure credit.

#### DESTINATION CAMPING AREAS

Resources. This is the most important factor because it is the attractiveness of the recreation opportunities that brings the customers more than anything else.

Resources in the form of a lake for swimming, boating, fishing or skiing, or a particularly scenic view or a point of historical interest or a good hunting area can be either on the place or nearby, as long as the customers have access to it. The attraction must be of sufficient interest to draw people from a distance and get them to stay several days.

Location. This is the second most important item. Taylor (see "Location" in Part One of this handbook) suggests that enterprises of this type over two hours travel time, but within 150 miles or 4 hours driving time of a major metropolitan area will be patronized largely by week end campers, although many will stay longer of course.

Beyond the 150 miles or 4 hours driving time the principal patronage will come from "people looking for a place to spend all or part of their annual holidays."

It should be in an area that has already established itself as a tourist or resort area. Otherwise it may cost too much in years and money to try to build it up by advertising over a wide area.

Facilities. The facilities recommended for overnight areas would also apply here, except that "drive-through parking is not

quite as important. If individual sewer risers are not provided, then it is essential to have a 'Sanitary Station' available." 2/

Since the customers will stay longer here than in overnight camping areas it is more important to provide sewer, water, and electrical hookups for all trailers equipped for their use. It is also desirable to provide some shopping opportunities for groceries, sporting goods and notions.

Financial. The capital investments, income and expenses will not vary significantly from those discussed under overnight facilities.

Studies of campgrounds in various parts of the country show a net generally running around \$2,000 for the season. Charges range from \$1 to \$3 per night with reduced rates for longer stays. For example, one campground we know charges \$2 per night, or \$5 for a 3-day week end or \$10 per week.

Advertising. The same methods are applicable as with overnight camps with perhaps more emphasis on word-of-mouth.

## PLANNING A CAMPING AREA

Mobile Homes Manufacturers Association or the Trailer Coach Association will assist in planning a campground area. Publications and camp layout plans as well as sanitary station plans are available from those offices at very little or no cost.

Layout plans as well as building plans are also to be found in the SCS list in the appendix of this handbook.

## ADVERTISING

All camping areas should be sure they are listed in all available guides or directories of such facilities. This is a must. Here is a list of the ones we know of:

Travel Trailer Park Guide  
Mobile Homes Manufacturers Association  
Travel Trailer Division  
20 North Wacker Drive  
Chicago, Illinois 60606

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Rand McNally Campground Guide  
P. O. Box 7600  
Skokie, Illinois

-----

Woodall's Mobile Home and  
Travel Trailer Park Directory  
Woodall Publishing Company  
740 North Rush Street  
Chicago, Illinois 60611

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Trail-R-Club of America  
Box 1376  
Beverly Hills, California

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Private Campgrounds, USA  
Camping Maps, USA  
P. O. Box 862  
Upper Montclair, New Jersey  
-----

Farm Vacation Guide  
36 East 57 Street  
New York, New York 10022

Campgrounds Unlimited  
Blue Rapids, Kansas  
-----

Alpine Geographical Press  
Champaign, Illinois

#### REFERENCES

- 1 "Outdoor Recreation on Small Woodlands," a talk by Walter S. Hopkins, Chief, Forest Recreation Research Branch, Forest Service, USDA, at the 62nd Annual Meeting of the Association of Southern Agricultural Workers, Dallas, Texas. February 1, 1965.
- 2 "Travel Trailer Parking." Published by Mobile Home Manufacturers Association, 20 North Wacker Drive, Chicago, Illinois 60606, and Trailer Coach Association, 1340 West Third Street, Los Angeles, California 90017.
- 3 "A Survey of Private Outdoor Recreation Facilities in Rural Areas of Western Oregon." Special Report 173, Agricultural Experiment Station, Oregon State University, Corvallis, in cooperation with RDED-ERS-USDA. April 1964.
- 4 "Income Potential of Various Kinds of Farm Recreational Enterprises in Missouri," B783, University of Missouri, Columbia, Agricultural Experiment Station and RDED-ERS-USDA. 1963.
- 5 "Opportunities for Private Campgrounds as an Alternative Use of Land." Circular 792. Agricultural Extension Service, Virginia Polytechnic Institute, Blacksburg, Virginia. February 1963.





## CHAPTER 8

### NATURE TRAILS

#### GENERAL

The opportunities existing for nature trails on farms in this country are probably not realized by most farmers. Consequently, the possibilities for profit in this business have hardly been touched.

The hunger of millions of city dwellers for knowledge in woods lore and biological facts of nature is an open end source of future business in this field for farmers wishing to capitalize on it. A trail wandering through the woods on almost any farm can lead to interesting and exciting exhibits of flora and fauna if they are properly marked and explained. Nature trails are fairly common in National Forests and National Parks, but very little has been done in the way of private enterprise in this category of recreation.

#### OPPORTUNITIES FOR NATURE TRAILS

As a major income-producing enterprise, nature trails should be established along main traveled highways or near population centers. Tourists along the main traveled highways can be a good source of income for nature trails that are properly advertised. Near urban centers a nature trail can be, if properly laid out and maintained, an excellent place for teachers to bring school groups for nature instruction.

As an added attraction for a vacation farm or a camping area, a nature trail is another drawing card to attract customers.

#### TYPES OF NATURE TRAILS

The Forest Service in a publication entitled "Developing Self-Guiding Trails in the National Forest" discusses three kinds of trails:

"A. The Story or Theme Trail. This trail tells a story or develops a theme. A definite story or theme gives a trail unity and coherence and gives the visitor a point of reference to retain along the entire route. Unity, coherence and a story theme increase the visitor's understanding and help him remember more of the interpretation.

B. The Miscellaneous Trail. This trail interprets a variety of features but does not attempt to show any relationship between them. It is the most commonly developed, perhaps because it is easier to plan than the story or theme trail.

C. The Nature Trail. . . This trail is concerned only with identification, not interpretation . . . . The true nature trail is one along which plants and other natural features are labeled with their common and scientific names and distinguishing characteristics. Such a trail serves the specific purpose of providing an opportunity for study by professional and amateur naturalists . . . . Let the trail wander wherever it needs to go to reach as many of an area's features as possible and, if necessary, allow side trails or spurs . . . ." 1/

#### FACTORS TO CONSIDER

Outdoor areas need not be especially unique to offer opportunity for worthwhile walks, according to Howard Michaud of the Department of Forestry and Conservation of Purdue University. "Although mountains, canyons and seashores may be of special interest, it is possible to observe unusual dramas of the living world in a common wood lot around a farm pond, a pasture, or an old orchard. Trails may be long or short, difficult or easy." 2/

- A. If the general public - young and old - are to be considered, there should be both long and short trails.
- B. It is well to mark the trails as to distance and time needed to cover each one. People may choose the kind of trail desired.
- C. Short trails may include a single type of habitat, while long trails may cover many habitats. 2/

#### Other suggestions:

- D. Fifteen to eighteen features are about the right number on a half-mile trail.
- E. Features for children as well as adults, if patrons are likely to include family groups.
- F. Don't overlook temporary features.
- G. Don't overlook features that visitors will be curious about, such as the height of the waterfalls or the distance to yon mountain.

- H. Don't overlook the fauna part of the natural habitat. Some excellent opportunities exist in most woodland areas for calling attention to the bird life; in fact, some places have developed bird walks. An SCS bulletin discusses one:

"Bird walks must be somewhat formalized to be profitable. Best suited for farms with wide variations in vegetation and land use. A sketch map or trail markers indicating locations where unusual birds may be seen is needed. (Out-of-state bird watchers will gladly pay admission on the possibility of adding just one bird to their life list of birds seen.) 3/

#### WHERE TO GET HELP

The Forest Service has experts in nature interpretation. The National Park Service has experts in this area also. State foresters could help; Soil Conservation Service technicians are well grounded in the type of information needed here. If there is a Recreation Commission in your state they may have technicians or specialists in this line. Colleges and universities, of course, can help in identifying the various exhibits and can assist in developing the signs.

#### INVESTMENT NEEDED

The financial cost of setting up a nature trail is very minor and consists only of the costs of having the leaflets or trail markers printed, clearing the trail, and setting up markers. Of course it will be necessary to have some sort of office at the beginning of the trail where the fees are taken in. If, on the other hand, this nature trail is a small one and intended only as an added attraction for a camping site or a vacation farm, there will be no plans for charging unless the operator feels that there are some opportunities to charge passers-by who are not customers of the other facility. This type of enterprise is something that is very flexible and can be adjusted to the possibilities for customers and the time and money available for building the enterprise. It can start small and build up into a quite large enterprise as business warrants.

#### RATES TO CHARGE

This will vary of course with the length of the trail and the amount of information provided, the uniqueness or attractiveness. The ranges are normally for adults per visit from 50¢ to \$1.50 and for children per visit 25¢ to 75¢.



Reduced rates should be offered to groups. For example a rate of 20¢ per child might be offered to groups of 20 or more youngsters when accompanied by an adult. Garden clubs or other civic organizations will often sponsor student groups that are unable to pay their own way.

### LABELING THE TRAIL

"A nature trail should have a name. Beaver Pond Trail, Snake River Falls Trail and Bur Oak Trail are a few examples. The trail name sign should be conspicuous at the beginning of the trail.

"Legibility and permanence are two important requirements of nature trail labels. Plastic labels are especially durable. Laminated plastic, which comes in many color combinations, can be inscribed on machines made for that purpose and produce signs that are legible, attractive and durable. Printing paper labels can also be affixed to the back of clear plastic and covered with several coats of liquid resin for durability.

"Plant labels should contain the common name, and below (in smaller letters), the scientific name of the plant." 4/

### ADVERTISING

Where the nature trail is the main enterprise, a number of different ways of advertising can be used. Roadside signs for example are important. Then it might be well to contemplate ways to get the attention of school officials so that classes can be brought to the area for educational purposes at reduced rates. For the most part, this is one enterprise where it would probably not be well to invest a great amount of money in advertising of the nature trail alone. On the other hand, where the nature trail is a part of a camping facility or other recreational enterprise, it is referred to as an added attraction in the advertising of the main enterprise.

### REFERENCES

- 1 "Developing the Self-Guiding Trail in the National Forests," USDA, FS - Miscellaneous Publication 968. For sale by the Superintendent of Documents, United States Government Printing Office, Washington, D. C. Price 20 cents.
- 2 "Developing Land for Recreational Uses - Workshop Proceedings" - Conducted by Purdue University Southern Indiana Forage Farm, Dubois, Indiana, July 2 and 3, 1963.
- 3 "Technical Guide," SCS in-service publication. Free. Write to Information Division, SCS, Washington, D. C.
- 4 "Recreation Technical Note No. 3," March 1965. Nebraska Soil Conservation Service. Robert J. Lemair, Biologist.



## CHAPTER 9

### RIDING FACILITIES

#### GENERAL

Horseback riding is an outdoor recreation activity of moderate interest relative to others. The ORRRC Report shows that the average person 12 years of age and over engages in horseback riding 1.25 days a year. This compares with 20.73 days per year of driving for pleasure and .07 days for snow skiing. Interest in horseback riding does seem to be growing over the Nation as a whole. There are two general types of businesses in this category. One is riding horses for adults and the other is pony rides for the kiddies. Supplementary enterprises are horseback riding camps, boarding horses for others, and pack trips for hunters.

A bulletin of the Arkansas Experiment Station, which listed 19 different types of outdoor recreation enterprises, found that riding stables and pony rides, with a combined total of 42 enterprises, ranked eighth. 1/ The most popular was fishing guide service, with 572, and the least was dude ranches, with six. A study in Southern Ohio found riding stables, with 7, ranked ninth in a list of 15, of which fish ponds were first, with 72, trout fishing and caves were last, with 2 each. 3/ A Missouri study showed riding stables, with 85, ranking sixth in a list of 14. In this survey fish ponds were first, with 342, and dude ranches were last, with 5. 2/

#### HORSEBACK RIDING STABLES

Aptitude. Aptitude is probably the most important factor in this recreation category. The riding stable proprietor needs to understand and like horses as well as people. Unless he has had a considerable amount of experience in handling horses, it would be poor policy for him to try to start a riding stable. He needs to know how to match horses and people, always with a view to the safety of both.

Location. Location is of primary importance for a successful riding stable. It should either be fairly close to an urban center or near a public park or other recreation attraction. The Missouri study showed that the unsuccessful ventures in this business had poor locations and were more than 5 miles away from a major highway. "The two ventures that were most successful had ideal locations on major highways at the entrance to state parks. More than 500,000 automobiles annually passed one of the facilities and more than 150,000 drove by the other. These two operators were able to attract 8,400 and 3,000 customers respectively. Assuming three persons per car, they were able to attract only six out of every

1,000 travelers as customers. This is a rather small number since the facilities were located in a center of the vacation area of Missouri." 2/

Acreage needed. One riding stable operator reported operating with only a 40-acre farm. However, this operator did have access to trails on a nearby public park. This sort of arrangement seems to be quite common for stables that are located near public parks or forests. In other cases, it may be possible for an operator to make arrangements with adjoining land owners for riding privileges on their places. Otherwise, if the riding stable operator depends on his customers confining their riding to his own place, the riders should have available at least 100 acres. This does not mean that all of this acreage needs to be devoted to riding trails, but this will give them some variable scenery. The operator would do well to have a substantial amount of grass pasture in order to save on feed bills and, if possible, should raise his own grain and hay.

Buildings. It will be necessary to have some stables for housing the horses. They should be confined a good part of the time during the riding season in order to keep them broken and manageable. Most operators find it desirable to have an indoor arena for use in breaking horses and also to enable them to give riding instructions during inclement weather. However, most farms have barns that are either adequate for these purposes or can be made adequate with some remodeling. One farmer remodeled a broiler house into an arena for this use. A tack room for the saddles, bridles, and other equipment is a requirement. A clubroom or lounge with toilet facilities will be needed.

Services offered. A riding track is desirable where the beginners can spend time riding in a confined area until they obtain some proficiency. Riding through fields and woods should be in groups, with one or more instructors along.

Most riders will doubtless prefer Western saddles, but English saddles should also be available.

Some stable operators also offer hayrides where they take a group on a nighttime outing, which may include a meal around a campfire and perhaps some entertainment or group singing. Charges for this will run around \$4 per person including food.

An establishment with a large acreage of wilderness-type land available, either on their own place or a nearby public park or forest, may find it profitable to organize trail rides that even include overnight camping.

Operating suggestions. Competent operators will insist on the customer demonstrating his riding ability before allowing him to ride alone.

Beginners should be required to take some instruction before riding, even in a conducted group.

It is well to have some rather strict rules and require adherence to them. Most stable operators find that with regular customers it is best to assign them to a particular horse, so that horse and patron will get to know each other and in this way there will be less likelihood of accidents.

Labor. Patronage of riding stables is distributed fairly evenly over the year and is generally not too highly concentrated on week ends, as is true in some activities. The Arkansas study showed an almost equal portion of the receipts came in the January-March quarter and the July-September quarter. Both of these quarters were exceeded slightly by the April-June and the October-December quarters. Of the receipts, 56% were received on week ends and 44% on week days. 1/ This allows for better use of the family labor the year round than is true in some enterprises.

Of course, with operators whose business depends primarily on resort patrons, this is not true. These people often sell down most of their horse herd at the end of the summer season and buy replacements the next spring. This enables them to save on feed costs and at the same time work toward improving their basic herd. Horses kept over the winter, if turned loose to pasture, are likely to require some retraining in the spring before they are safe to turn over to the ordinary patron.

Investment. Most of the investment with riding stables is in land and horses. The Ohio study showed that 82% of the total investment was in land, which averaged \$181 per acre. The range in total investment was from \$16,250 to \$35,700. Next to land, the largest item was operating equipment, including horses, which were valued at roughly \$150 per head. 2/ Most farms have buildings that are either presently suited for stables or can be remodeled without too much cost. Plans for stables can be obtained through the Soil Conservation Service. (See Appendix.)

Care should be given to laying out trails to obtain the best scenic value, protect the land against erosion, and protect the horses and riders against injury. Soil Conservation Service is prepared to provide technical assistance in this field.

Cash income. Methods and rates of charging vary. Most common is the charge of so much per hour for riding privileges. This generally runs from \$1.50 to \$3.00 per hour. If the fee is to include riding lessons, the rates may run from \$4.00 per hour for group lessons to \$5.00 per one-half hour for individual lessons. Some operators are able to obtain contracts with private schools or clubs for scheduled riding lessons. In such cases, with definite income



assured, reduced rates would be an appropriate incentive.

Total annual receipts ranged from \$2,000 to \$12,000 in various studies. The gross annual receipts per horse saddled for rental ranged in one study from \$86 to \$600. 1/

Expense. This is a highly variable item in the riding business and depends on whether or not the operator raises his own feed, shoes his own horses and what kind of liability insurance he is able to secure.

One study showed feed costs for riding stable enterprises ranging from 25 to 50 percent of the total annual expenses. Operators who hire their shoeing done paid as much as 25 percent of their total annual operating expenses for this item.

Liability insurance costs can often be kept down by doing some shopping around. Operating as a camp will help in this respect.

Annual operating expenses varied in the Ohion study from \$464 to \$6,200. 3/

#### RIDING CAMPS

Both day and weekly camps for horseback riding seem to be gaining in popularity. This arrangement undoubtedly has many advantages, especially from the standpoint of compatability between horse and rider.

Day camp rates, for a 7-hour day, run \$6 per day to \$20 per week. Week end rates, Friday through Sunday, are quoted by one camp at \$25. Customers furnish their own transportation to and from the camp.

Weekly camp rates are quoted at \$55, including room and meals. Customers furnish their own bedding and linens.

#### BOARDING HORSES

This can be a good supplement to a riding stable business or a business in itself. Rates for boarding horses range from \$30 to \$65 per month plus the cost of feed, and may go as high as \$100 per month where training the horse is included.

#### PACK SERVICE FOR HUNTERS

Owners of horses frequently are able to operate a guide and pack service for big game hunters. They take parties into remote areas inaccessible to vehicles where they know deer and elk or other big game can be found. Charges generally are \$50 per day



for a 5-day trip. Hunting is often on Government lands but may in some cases be on private lands owned or controlled by the guide. The season is short, generally not over 11 days.

Expenses consist of food for the hunters, feed for the horses and depreciation on the horses and equipment.

### PONY RIDES

This is a growing form of outdoor recreation for youngsters and is apparently replacing the old Merry-Go-Round of earlier years. It consists of a small riding ring, generally not much larger than a Merry-Go-Round, where the ponies are led or trained to walk in a circular path. The main investment here is the ponies and saddles. Ponies vary from \$150 to \$600 each.

Often times these pony rides are operated in connection with a larger recreation complex. They may also be operated in connection with a riding stable as a means of attracting whole families to the enterprise.

This type of operation can be carried on in several forms. Some farmers operate these rings on their own farms if they are close enough to the population center; others rent a vacant lot in the city and transport their ponies back and forth each day; others obtain concessions from public parks or perhaps a private enterprise, wherever tourists or vacationers congregate.

Rates charged for pony rides generally are around 25¢.

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- 2 "Income Potential of Various Kinds of Farm Recreational Enterprises in Missouri," Ronald Bird. University of Missouri, Agricultural Experiment Station, Columbia, Missouri. Bulletin 783. December 1963.
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## CHAPTER 10

### FISHING FACILITIES

#### GENERAL

Fishing is one of the most popular of all outdoor participation sports. It is undoubtedly the most popular type of outdoor recreation enterprise in rural areas. A USDA release states that of the more than 1.3 million farm ponds and watershed project dams built on private land, 660,500 are stocked with fish and nearly 261,000 are open to public use on fee or free basis. Many farmers who stocked their ponds originally to provide fishing for themselves and their families and friends have subsequently discovered that by charging a fee they can supplement their farm incomes.

In nearly every state where surveys have been taken of farm recreation enterprises, fishing ponds and lakes have turned out to be the most popular by far. A survey of 255 recreation enterprises in southeastern Ohio disclosed that 74 were for fishing. The next most popular type of enterprise in this survey was vacation farms and dude ranches, with 50. In South Carolina 14 out of 31 enterprises were for fishing. Arkansas found 797 out of 2,233 recreation enterprises were for fishing. None of these include fish bait farms.

It should be noted, however, that the most popular does not mean the most profitable enterprise. In a survey of 83 FHA borrowers for recreation purposes, who had completed a full season's operation, the least profitable of the eight groups covered was "fishing for recreation."

Fishing's most important place in recreation, however, is frequently in a complimentary or supplementary relationship to other forms of recreation.

This chapter will be concerned primarily with fish ponds and lakes and their management, both warm water fish and trout. Because the combination of bream and bass seems to be the most satisfactory for farm fish ponds, most of the discussion regarding warm water fish production will be pointed toward this combination.

Management of fish ponds has become as scientific as management of crop and livestock operations. Any farmer who expects to make money out of a fishing enterprise should familiarize himself with the latest scientific information on fish production and then make fullest use of this information in his operation. Attempts to make money from fish production, using haphazard methods, are doomed to failure.

### WHAT IS NEEDED FOR A FISHING POND?

A body of water, generally an acre or more in size, is normally considered adequate for a fish pond. The water should be free from chemical contamination. It should be accessible. The entrance should be so located that it can be fenced off to channel customers through a gate for collecting fees. A very little circulation of water is needed for the best managed fish pond. "Too much water entering a pond is bad for several reasons:

- A. Mature fish are carried over the spillway.
- B. Fertilization and high yields of fish are made impossible.
- C. The owner is forced to build an expensive dam and spillway.
- D. The life of the pond is shortened too rapidly by siltation.
- E. Many times undesirable species of fish, such as suckers, carp, bullhead, catfish, shiners, etc., will enter the pond. All sites on streams that carry much flood water should be avoided.

"Some ponds can be protected by turning the excess water around the pond through a diversion ditch. An ideal location is on bottom land that is not subject to flooding where there is a sufficient water supply that can be directed into the pond in the amount required. Ponds formed by damming a large stream are ordinarily not successful, because it is almost impossible to prevent the escape of large numbers of adult fish and the introduction of undesirable species. Ponds constructed on small spring runs not subject to severe floods or where storm water can be bypassed or diverted from the pond develop high fish productivity." 2/

### WHAT ABOUT BUILDING A POND?

Any FHA applicant or borrower should be referred to the Soil Conservation Service for technical assistance in planning a dam to impound water. In some cases it may be possible to get assistance from the Agricultural Stabilization and Conservation Service in the form of cost sharing and, perhaps, in adjustment payments.

Late summer or early fall is recommended by the Georgia bulletin as the most appropriate time to construct a pond. Construction should be completed before water is impounded. Water should be impounded as soon as possible after completion of construction in order to prevent growth of weeds, bushes and brush.



## WHAT ABOUT RECLAIMING A POND?

"The renovation of old ponds requires the making of structural changes necessary to obtain suitable habitat as well as fish-population changes that affect the balance between predator (carnivorous) and nonpredator (forage) species. The occurrence of ponds with stunted fish population and poor fishing is apparently common throughout the county." 2/

"Ponds may be renovated to produce wonderful fishing if they are situated where the owner can gain control of the water that enters the pond. If the topography of the land permits a diversion ditch to bypass the excess water, the pond can easily be renovated to produce good fishing." 2/

The diversion ditch around the pond should be big enough to carry the normal flow of water plus any flood waters that may come down the stream.

Shallow edge ponds always furnish poor fishing after three or four years. The ponds constructed without deepening the pond edge to a depth of two feet usually always have weeds which are conducive to an overpopulated fish condition. The original shallow water area can dry out for six weeks. Then a bulldozer can deepen the pond edge without bogging down. Another way of getting rid of shallow water that has a depth of less than 2 feet is by using soil that is outside of the pond and pushing it into the pond, filling the area that is less than 2 feet. A dragline can deepen the pond edge at any time of the year. Weeds must be destroyed before you can obtain proper balance." 2/

Seepage. If this is a problem and there is too much water running through the dam because of seepage, there are ways of correcting this situation. Soil Conservation Service can advise on this.

Spillways. These can cause trouble if they are too narrow because flood water then runs over them at too great a depth, carrying with it too many fish. A spillway should be wide enough so that water will never go out at a depth greater than 3 to 6 inches.

Weed growth. "Heavy weed growth usually appears within a year or two in improperly fertilized ponds. Large amounts of underwater or above-water weeds inevitably lead to overpopulation and stunted fish. Weeds in ponds are undesirable for two other reasons.

- A. They provide excellent places for mosquito breeding, and
- B. Collection of masses of weeds upon the hook causes poor and difficult fishing. Certain weeds, such as the water hyacinths and duck weed, reduce the oxygen content of the water.

"There are two things that need to be done before eliminating the weeds.

- A. If the pond is fed by too much water, the excess water must be diverted, and
- B. The pond edges should be deepened so that there will be no water less than 2 feet deep.

"If these two requirements are met, it will be easy to eliminate and prevent the recurrence of underwater weeds by proper fertilization." 2/

There are various ways of killing weeds, varying according to the type of weed. The Soil Conservation Service technicians can supply information on the best ways to kill pond weeds.

#### STOCKING A NEW OR RECLAIMED POND

"Of first importance before stocking a pond is knowing the size of the pond to the nearest 1/10th of an acre. Every pond should be surveyed for two reasons.

- A. To stock the proper number of fish so they will grow to a large size in a comparatively short time, and
- B. To know how much fertilizer should be applied each time so you will not supply too much or too little with each application." 2/

"Count the fish that are to be stocked. The number of fish added to the pond should actually be counted to get neither too many or too few. It is just as important to get the proper number of fish to reach a high production as it is to plant corn properly to produce corn of high yield.

"One of the most popular misconceptions is the belief that placing vast numbers of fish in a pond will increase fishing. In some respects, as to food supply, fish are no different than livestock and a pond (an aquatic pasture) is just like a livestock pasture, capable of producing so much food for so many livestock. If we had two ponds just alike and stocked one with 1,000 fish and the other with 10,000 fish, and drained them after a year, we would find that the total pounds of fish recovered from both ponds would be about the same, except that the pond having 1,000 fish would have catchable and edible size fish, while the overcrowded pond would have stunted or runt fish." 2/

Time of stocking. Bluegills should be stocked in the late fall or early winter. Bass should be stocked at the same time or up into spring.

Stocking ratio. "The correct stocking ratio per acre of water is given below for both fertilized and unfertilized ponds. Small unfertilized ponds have proven unsatisfactory in Georgia because they support a relatively small number of edible size fish and usually become filled with weeds if the pond doesn't remain muddy most of the time. (Rates of stocking given are per surface acre.)

Combination A - Bluegill Bream and Large Mouth Bass

Fertilized Pond:

1,000 bream fingerlings added during fall or winter. 100 bass fingerlings added same fall or winter, or 100 fry the following spring.

Unfertilized Pond:

500 bream fingerlings added as above. 50 bass fingerlings or fry added as above.

Combination B - Bluegills, Shell Crackers and Large Mouth Bass

Fertilized Pond:

850 bluegills added as in previous section. 150 shell cracker fingerlings added the same time as bluegills. 100 bass fingerlings or fry added as in the previous section.

Unfertilized Pond:

400 bluegills added during fall or winter. 100 shell crackers added at the same time as bluegills. 50 bass fingerlings added during same fall or 50 bass fry added the following spring."

Use only hatchery reared fish. The fish used to stock a pond should be fry or fingerling size. One should use only hatchery reared fish to be sure that they are free from diseases and do not contain wild species." 2/

WHY AND HOW OF FERTILIZING A FISH POND

How fertilizing improves a pond for fishing. "The fish do not eat the fertilizer. Fertilizer is rapidly dissolved by the water. These nutrients added to the water cause a growth of microscopic plants called algae. The microscopic algae provide food for insect larvae and water animals that are in turn eaten by the forage fish, such as bluegills, catfish and small crappie.

"The life cycle within a pond runs in a definite order from smaller to large organisms and each succeeding group depends upon



the preceding for the synthesis of its food supply. The abundance of these organisms is dependent upon the amount of available inorganic matter as nitrogen, phosphorous and potash in the water." 2/

The second important effect of using fertilizer in a pond is to control the growth of underwater weeds. This is brought about by the fact that the fertilizer increases the growth of algae as noted above, which causes a clouding of the water sufficient to cut out the sunlight so that the underwater plants die from lack of sunlight. Where natural organic fertilizer is washed down into the pond from the surrounding slope, this is naturally a cheap way of fertilizing the pond. However, if it is necessary to haul and spread organic fertilizer, it is not a very good substitute for the commercial fertilizer.

Kinds and amounts of fertilizer to use per acre. "Two grades of commercial fertilizer is available in Georgia for fish ponds. These are 8-8-2 and 20-20-5. Either is acceptable but the amount to use per acre will vary with the analysis chosen. With 8-8-2 the amount is 100 pounds per acre per application. With 20-20-5 the rate is 40 pounds per acre per application. Average number of applications of fertilizer for Georgia fish ponds is 10 to 12 applications annually." 2/

When to fertilize and how often. "The growing season of the microscopic algae is the best time to fertilize. This is from early spring well into the fall. You need to build up your pond's fertility quickly and as easily as you can in the spring. Otherwise, you fail to benefit fully from the algae growing season.

"Fertilize new ponds before the hatchery fish arrive. You will want to grow a lot of insect and animal food while the weather is warm. You also need to prevent the start of water weeds, thus you should begin to fertilize as soon as your pond begins to fill -- in spring, summer, or early fall.

"Waterweeds that have already invaded your pond will use up the fertilizer you add. For this reason kill them first." 1/

Cost per acre to fertilize the pond each year. "Cost of fertilizing ponds vary but the cost is from \$20 to \$30 per acre each year on small ponds and only slightly higher on larger ponds. Ponds that receive nutrients from fertilized pastures certainly will need less fertilizer than a pond that does not receive any nutrients." 2/

#### HARVESTING THE CROP

"When bream are stocked during the fall and the bass the following spring be certain to start fishing one year after the bass have been stocked. The bass will average about 1 pound in



that time. Remember not to fish at all until then because while fishing for the bream, which may be large enough, one cannot help catching, even with worms, the little bass. None of the bass should be removed until they reproduce. The removal of bass before they reproduce will throw the pond out of balance. When the water becomes 65 degrees F. the males fan out nests and when the water becomes 70 degrees F. and remains at or above 70 degrees F. for a couple of days, the bass will spawn." 2/

Importance of fishing. After the cycle is under way "all ponds should be fished each year for recreation, food, and to obtain full value of the fertilizer expended. If only bass are fished, an overpopulation of the bream will result and fishing will decrease. If only the bream are fished, overpopulation of the bass will result and again fishing will decrease. Three to seven pounds of bream should and can be caught for each pound of bass. Most pond owners need not worry about fishing each species properly, as there will be approximately 20 bream fishermen for every bass fisherman."

Catch all the fish you can while they are on beds. "Fish are very prolific. A bluegill bream  $\frac{1}{2}$  pound in weight will form and lay as high as 51,000 eggs at one time. Then, according to the food supply, it may spawn two more times during the same year. A bass may lay as high as 40,000 eggs at a time but very seldom spawns more than once a year. Therefore, one can readily see that fish can be caught while they are on their beds during the spawning season for three reasons:

- A. They are easy to catch during the spawning season.
- B. The adult fish need to be harvested.
- C. If it were possible to capture all adults with the exception of one pair, this one pair of fish would produce enough young fish to replenish the pond." 2/

Rates to charge. There are many different ways and rates to charge for fee fishing. Probably the most common way and rate is to charge \$1 to \$3 per pole, which gives the fisherman a right to fish all day. Some ponds have a maximum number or maximum poundage of fish that can be caught with this fee. Over and above that maximum there is an extra charge. Others charge \$1 or more per pole plus so much per pound for all fish caught.

#### OTHER TYPES OF WARM WATER FISH

"Many pond owners want catfish, crappie, and other kinds of fish in their farm fish ponds. These and most of the desirable American species have been tried in various combinations at the Alabama Agricultural Research Station. These experiments showed

that the bass - bluegill combination produces the best fishing and the most pounds of fish per acre with the least trouble. Other species are seldom successful. Crappie and catfish can be stocked with the bass and bluegills in large irrigation reservoirs such as those in the rice area of Arkansas, Louisiana, Mississippi, and Texas. The fish population diminishes as the water is lowered in the summer but the fish grow rapidly again when the reservoir is filled. You do not have this essential control of crappie and catfish in the usual fish pond.

"Carp, catfish or buffalo are stocked alone or together in some warm water ponds with varying success. One method is to obtain useable size fish from large seining operations, haul them sometimes long distances and dump them in the pond for immediate fishing at a small fee per day. A more productive method is to grow fingerling catfish, buffalo or carp to market size in ponds that are drained and restocked annually or more often. In rice growing areas this method may be used in rotation with rice." 1/

For those who are interested in raising catfish, a good bulletin is "Raising Channel Catfish in East Texas." 11/

#### SPECIAL CONSIDERATIONS FOR TROUT PONDS

"Ponds above 5,000 feet in the West are usually cool enough for trout. In the fog belt of the Pacific Coast, in the Northern Tier States, in the Appalachians and in the New England States, trout thrive in ponds at lower elevations. Ponds at any elevation or in any latitude fed by cold springs or cold water wells may be suitable."

Temperature range. "Trout grow best in water 55 degrees, to 68 degrees F., but will survive a slightly wider temperature range.

"If the water in your pond does not get warmer than 70 degrees F., 6 inches below the surface of the deep water it probably will be cool enough for trout. Even though the surface water and the shallow water reach 75 degrees to 80 degrees F. in midday, the deeper water may be cool enough. Water that is too cold slows the growth of trout. Cool water produces less trout feed and trout do not feed as well in very cold water. For example, where mountain pond waters seldom go above 50 degrees F., the trout in them grow slowly."

"On the other hand, water that is too warm is always a hazard to trout. As water warms it loses oxygen that fish need for survival; the warmer it becomes, the less oxygen it is able to hold.

"Increasing inflow of cool water usually is the easiest way to lower water temperature and to raise the oxygen content.

"If the water temperature is critically high for only a short time in mid-summer, your pond may still be satisfactory for trout.

Do your stocking or re-stocking in spring or fall when the water is cool. This will give the fish an opportunity to gradually adjust to the peak summer temperature. As a general rule avoid stocking your pond when the surface water is above 65 degrees F."

Stocking the pond. "If other fish are already in the pond, drain it or use toxicants to kill all fish before stocking trout. If you need to use toxicants, contact your State Fish and Game Agency for permission and instructions.

"To have successful trout fishing try to prevent escape of your trout and invasion of other fish into your pond. This is not always easy because screens fine enough to control fry or fingerling clog rapidly." 5/

Kinds of trout. "Rainbow trout and brook trout are the preferred kinds for farm and ranch ponds." 5/

Number to stock. "Stocking at the rate of 500 to 1,000 advanced fry or 300 to 600 fingerlings to the surface acre gives satisfactory results in most fertile ponds. If the pond is infertile, use the lower stocking rate.

"Advanced fry as used here are fish 1 to 2 inches long. Fingerlings are fish 2 to 4 inches long. Since fewer fry than fingerlings survive, you need to start with more fry than fingerlings.

"If you stock at these rates and conditions are favorable, your trout should grow about one inch a month until they are 9 to 10 inches long.

"You can stock eating-size trout at rates of 100 to 300 trout per surface acre." 5/

"Surface acre (not volume), fertility, and quality of the water and the length of the growing season determine the carrying capacity of your pond."

Restocking. "It is best to do your restocking in late summer or fall after most of the larger trout have been fished out.

"To avoid the possibility of cannibalism, some pond owners prefer to remove all large trout before restocking with fingerlings." 5/

Supplemental feeding. "Most pond owners will not need to do any supplemental feeding.

"Ponds stocked at rates recommended in this bulletin usually will produce enough fish food for satisfactory trout growth without supplemental feeding."



"In theory you could stock as many fish as you want if you give them enough food. In practice this doesn't work. Crowded fish are easy prey to disease and parasites." 5/

"Feeding makes the fish tamer and therefore easier to catch. This may be an advantage or disadvantage according to your desire and fishing skill."

Harvesting your fish crop. "If your pond is a good one it should produce 50 pounds of trout per acre each year without supplemental feeding. It may produce more.

"Only a small percentage of the trout that you stock will live more than two years. The longer you leave trout out in a pond, the fewer you will have. Three years after stocking, even if you don't do any fishing, you will have only a few large fish. These may be hard to catch and their total weight will be far below the carrying capacity of your pond.

"Big trout are fun to catch but growing big ones in a farm or ranch pond is not an economic goal. Make every effort to remove the big ones.

"You are most likely to catch trout when they are feeding. In warm weather they feed mostly in the mornings and evenings. In early spring or late fall, when the water is cold, they usually feed during the middle of a sunny day."

Choosing a site. "Low or seep areas too wet for crops sometimes make good pond sites. A gully may be suitable after conservation measures have been applied to the land. Building a pond in a gully may help to check erosion and, at the same time, convert an unsightly area into an attractive spot. Good trout ponds have been made by excavating into water bearing gravel. Some sand or gravel pit and strip mine pits make satisfactory trout ponds.

"Locate the pond where it will not be flooded or get heavy runoff."

Size. "Generally it is best to build several ponds of one to five acres each. Smaller ponds are easier to manage and produce more pounds of fish per surface acre than do the larger ones."

Depth. "In areas with hot summers, or where ponds freeze over, one-fourth of the pond should be at least 10 feet deep if it is without running water. Depths of from 12 to 16 feet may be necessary in areas with long cold winters. In climates where little or no ice forms and the summers are cool, or where there is running water, a depth of 6 to 8 feet or less is usually enough."



Water supply. "The water should be free from heavy silt pollution and noxious gases. It should be within an acidity-alalinity range of PH 6.5 to 9. However, trout may survive ranges as low as PH 4.5 or as high as 10, if the change is not abrupt."

"There is no fixed or easy rule for finding out whether water in your pond will support trout. If you have a large pond, one way is to put a screen box, commonly called a 'livebox', containing a few healthy trout in the pond for a few days.

#### Cautions.

- A. "You need to be more careful when using fertilizer in trout ponds than when using in bass and bluegill ponds because trout require more oxygen than warm water fish. The decomposition of microscopic plants (bloom) during hot weather, or under the ice reduces the oxygen and may kill your trout.
- B. In an area where ice covers the pond a month or more, stop fertilizing in early summer so that the bloom can decline before the pond freezes over.
- C. Use only inorganic (chemical) fertilizer. Organic fertilizer such as barnyard manure stimulates the growth of fish food but uses oxygen as it decomposes." 5/

What to charge. Charges for trout fishing generally run higher than for warm water fish. A frequent charge is \$2 to \$3 per day per person, with a charge of so much per pound in addition or at least over a certain poundage. Another frequent charge is 10¢ to 15¢ per inch of fish caught.

#### OTHER TYPES OF FISHING ENTERPRISES

Some farmers are able to make money by charging for access to a stream that runs through their place. Generally, these charges are made on the basis of so much per person per day. Since the fish in the stream are generally stocked by the public agencies, it isn't permissible to charge for the fish. Therefore, the best income-producing possibility is to charge for suitable access to the stream.

Another type of fishing enterprise is the float fishing operation, which is popular in a number of areas. This type of enterprise generally consists of a specially constructed type of boat holding three persons, one of whom is the guide who operates the boat and speeds it up or slows it down, according to the particular presence or absence of good fishing water. These float trips down a stream often are for 24-hour trips.

Charges for this type of service may run from \$20 to \$40 per day. Another type of enterprise in the mountain areas consists of

guides who provide pack horses for taking parties of fishermen into lakes beyond the reach of motor vehicles. Charges for this type of guide service may run from \$20 to \$30 a day.

#### BAIT PRODUCTION

Earthworms. The Georgia State Game and Fish Commission has prepared an excellent little bulletin on production of earthworms. It is entitled "Raising Fish Bait." Anyone interested in producing earthworms should certainly avail themselves of this bulletin. Also, he should visit someone who is in the bait business to find out something about not only the methods of raising but, perhaps more important, the methods of distribution of his product. Ways of packing and shipping in order to assure the arrival of the greatest number of live bait are very important to this business.

Minnow farming. There is an excellent bulletin on this subject written by Ralph William Altam and W. H. Irwin of the Oklahoma State University at Stillwater, Oklahoma. It was published by the Oklahoma Department of Wildlife Conservation, Oklahoma City. Other bulletins available on this subject are listed in the references on the following page.

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- 10 "Minnow Culture in Kentucky," by Mayo Martin, Division of Fisheries, Kentucky Department of Fish and Wildlife Resources, Frankfort, Kentucky.
- 11 "Raising Channel Catfish in East Texas," by Ervin Maclin, Warren Cooper, and Gerald Maynard. September 1963. Long Leaf Soil Conservation District, Woodville, Texas.
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## CHAPTER 11

### HUNTING FACILITIES

#### GENERAL

"There is more money made from hunting and fishing in the United States than comes from all of the athletic events in the world. A billion dollars a year is spent by hunters." (From a speech by Jim Hughes of the Fish and Game Division of the Indiana Department of Conservation.) Most of this is spent on guns and equipment of course. But furnishing the game is also beginning to be an income-producing feasibility.

As our population increases the pressure on land becomes greater and individuals and clubs look for hunting areas where they can rent or purchase exclusive hunting privileges. Federal and State governments are sponsoring programs that will secure hunting privileges for the general public on private lands because there isn't enough public land to accommodate all the hunters.

#### HUNTING AREAS

In some places farmers and ranchers have banded together and pooled their land into hunting areas where they control and regulate hunting. They then charge a fee to a limited number of hunters, or they may lease the privilege to a hunting club. The regular hunting regulations of the state and locality apply here. Sometimes farmers are able to earn extra income by providing board and room to hunters during the season. Rates are generally high but the season is short so the income is quite limited. Consequently, it isn't an arrangement that warrants any substantial investment as such.

Some farmers who live in the national flyways have been able to build duck blinds and rent them advantageously to hunters. Rentals may be by the day, i.e., as high as \$30, or by the season -- up to \$200.

Guide service for big game hunters. Guides for big game hunters generally furnish pack animals and saddle horses. Sometimes this is a supplementary, post-season activity of a riding stable or a vacation farm or youth camp. On the other hand it may be the only recreation enterprise in which a farmer or rancher engages. In that case it would be classified as a "Hunting Facility." A short discussion of the economics of this type of enterprise is to be found under "Riding Facilities."

#### SHOOTING PRESERVES

Shooting preserves where pen raised birds are released in prepared cover ahead of the hunters simulate natural hunting. They

are a more specialized business than operation of a hunting area. Preserves often require a high investment in land and facilities. They are generally best suited as a supplemental enterprise to a farming operation which provides the land and much of the equipment thus reducing investment chargeable to the preserve. Profits on preserves are usually not high although there are notable exceptions. However, as supplements to farm operations they can be very rewarding.

The number of preserves has grown since 1954 from 1,663 (449 public and 1,214 private) to 2,121 (563 public and 1,558 private) in 1963. Preserves are allowed in 45 states (1965).

Pheasants are the most popular bird, followed in order by bobwhite quail, mallard ducks, and chukar partridge.

Aptitude. Interest in working with dogs, birds, and in particular the customers, is a must. Enough knowledge of hunting to create a realistic hunting situation is necessary.

#### Land.

##### (a) Acreage.

The ideal size is between 300 and 500 acres. An operator may own 100 or 200 acres and lease additional land, provided terms are equitable as to number of years and type of farming to be conducted. An operator can farm and have a shooting preserve on the same acreage if he plants his crops in strips.

A preserve can use patches of untillable farmland, washouts or creek bottoms of an operating farm. Proper design of cover can reduce required acreage.

##### (b) Terrain.

Terrain should be varied, but not steep. Customers come to shoot -- not mountain climb. Cover is important. It is the operator's means of controlling released birds, and thus influence the recovery rate. Properly designed planted strips, and/or mown paths will help hold birds for the dogs, flush birds where they can be shot, and keep missed birds from flying off the preserve.

"Your present and future land use plans are important considerations in a shooting field layout. If you expect to use the tract for shooting only, you will want to plan a layout mainly around perennial plants. These in the long run are least expensive. If you intend to harvest crops and forage, you will want to plan a cropping system of annual plants." 2/

Facilities. If birds are to be raised, incubators and brooders (which often can be bought secondhand from small poultry operations), and rearing pens will be needed. Holding or flight conditioning pens will be needed for all birds, whether bought as adults or raised. A duck pond and flight tower are required for a duck operation. 6/

Other facilities include: building space (feed storage and bird dressing room), bird picker, freezer, kennels, and a clubroom or clubhouse as a gathering place for hunters.

Dogs are also a depreciable facility. Good dogs may cost \$100 and up at 8 weeks of age. Good trained and proven dogs may cost as much as \$2,000.\*

Labor. Since the season for shooting preserves generally runs from October 1 to March 31, this type of operation meshes ideally with farming from the standpoint of labor. The farmer can generally hire neighbors for guides if he doesn't have sons of his own who can perform the service. He may find it desirable to contract out to a neighbor the furnishing of dogs and guide service.

Investment. (Based on Maryland study.) Average investment in land was about \$30,000. (If the preserve is supplemental to other land uses this is not a cost.) Investment in other facilities averaged about \$4,000, ranging from \$100 to about \$15,000.

Income.

- (a) Birds. There are two basic systems of charging.
  - (1) Charging by the number of birds released puts the risk of a low rate of bird recovery on the hunter.
  - (2) Charging on the number of birds harvested means that income is dependent on the customers shooting ability or the recovery rate. Recovery rates usually range from 60% to 75% of the birds released. This rate is usually lower the first year. Under either system, a minimum fee is charged by most operators. The normal rates charged are: pheasants \$5.00 each, minimum \$20.00; quail \$2.00 each, minimum \$20.00; ducks \$4.00 each, minimum \$20.00; chukar \$2.50 each, no minimum. 7/
- (b) Dressing and other. This is a necessary customer service and arrangements for it should be made. It can also be quite profitable. Charges usually range from 65¢ for ducks to 25¢ for quail. Supplies costs per bird are estimated at about 5¢. 7/

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\* A Maryland study revealed almost no dog cost. Dogs were usually gifts, or raised at home.

Good dogs are a must. They are largely responsible for the rate of bird recovery, and customer satisfaction.



Ammunition should be offered as an emergency service, but not in competition with local markets. (If you don't compete with them, they are a good place to advertise.)

Income is determined largely by the number of birds sold. In Maryland, this averaged about 1500 birds, ranging from 450 to to 5,000. 7/ One authority has stated that at least 5000 birds should be handled for a profitable operation. One Maryland firm selling only 700 birds was very profitable as a supplemental enterprise to the farming operation. Surplus birds are usually marketed for the table.

Expenses. Authorities say that bird costs (the major item in the budget) are about the same whether birds are purchased or raised and it ranges:

pheasants	\$2.00-\$3.50 per bird
quail and chukar	\$1.00-\$1.50 per bird
mallard ducks	\$2.00-\$2.50 per bird

Liability insurance and state licenses are other items of expense. Shooting preserve insurance is available at reasonable rates and could avoid financial disaster. Shooting preserve regulations of various states differ. It is highly important to inquire into the shooting preserve regulations of the state in which a preserve is to be located.

Each state has different laws concerning shooting preserves. In thinking of starting a preserve, the Game Commission should be consulted. (Many Game Commissions have men trained in preserve problems and these men can offer much good advice.)

Advertising should be substantial until the enterprise establishes a reputation. Be sure to get listed in the National Shooting Preserve Directory, National Shooting Sports Foundation, Inc., 1075 Post Road, Riverside, Connecticut. Brochures should be placed with sporting goods stores, filling stations, and sportsmen's clubs. Adequate roadside signs should lead to the place. Listing in the yellow pages of the city phone book might be desirable.

#### SUPPLEMENTARY ENTERPRISES

Trap shooting. This is a good way to "warm up" a customer before the real hunt. It often allows the operator to stop unsafe gun handling before a novice hunter goes into the field. Also trap shooting can become a year around activity to keep customers aware of the preserve and bring their friends.

"Crazy Quail" (a trap sunk in the ground that throws low targets in any direction) or "Sneak Traps" (traps hidden in the field and



remotely triggered) provide excitement and keep the hunters eye sharp during the off season. (Further information is available from the National Shooting Sports Foundation.)

Boarding and training kennels. Hunters are proud of their own dogs. However, many who live in the city haven't space and will be looking for some place to board them. One farmer converted an old chicken house for this purpose by partitioning it off and adding fenced concrete runways out from each pen. Fees can run around \$1.50 per day.

Training can also be profitable if the operator has the knowledge, desire, and time to work with dogs. Both boarding and training fit well with preserves as each may contribute to the other's business.

Field trials. Jim Hughes describes the possibilities here:

"We have quite a number of field trial organizations throughout the States and they hold field trials state-wide from October through May, in fact, it is not uncommon to have several field trials being conducted at the same time through the State. With the shooting preserves able to operate only six months of the year, we certainly have another source of income from this particular group of people. Sunday hunting is prohibited in Indiana but a field trial can legally be held. These organizations and groups of people are willing to pay the land owner for the privilege of holding a trial on his land. The renting of saddle horses to spectators to follow the dogs is another source of income. Many of the farm wives and children will operate a food and drink stand."

Guide service. For bird hunters this may be supplementary to a shooting preserve or hunting area. In some cases the shooting preserve operator may have his own dogs and hire guides to take them with the hunters. In other cases he may simply arrange for independent guides with their own dogs who are paid on a fee basis which ranges from \$10 to \$15 per day.

Guides and dogs are usually included in the minimum bird charge, though some operators do charge extra for both guides and dogs.

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## CHAPTER 12

### WINTER SPORTS AREAS

#### GENERAL

As far as winter sports are concerned skiing is by far the most popular. However, ice skating may have a place in the rural community striving for a year around sports program. Curling seems to be gaining popularity, especially in the states bordering Canada, where the sport has a large following.

All winter sports should be considered in the light of their possibilities for making multiple use of the facilities and thus increasing the economic feasibility of a recreational development. Ski lifts operate during the summer months in some areas, providing a thrilling and scenic experience for tourists and bringing in extra income. Curling rinks have been developed in connection with golf courses in some places, using the rink for cart storage space in summer and giving the lounge, locker room and dining room year around use.

#### GROWTH OF SKIING

Interest of the general public in skiing in the United States began with the 1932 Winter Olympics held at Lake Placid, New York. It was estimated that at that time there were probably 50 thousand skiers in this country. 1/ Now, following the tremendous expansion in interest which began to accelerate about 1951, there are estimated to be between 5 million 1/ and 11 million 2/ skiers in this country. The President of the U.S. Ski Association estimates there will be 45 million skiing Americans by 1985.

The nation's first rope tow was installed at Woodstock, Vermont in 1934; the first chairlift in this country was placed in operation in 1937 at Sun Valley, Idaho. 2/

As of December 1964, the United States Forest Service alone reported 166 ski areas all or partly on national forest land. 1/ Altogether there are nearly 600 ski areas in North America, including Canada.

#### TYPES OF SKI AREAS

"Ski areas can be divided into three major categories based on markets. This breakdown is useful for evaluating the economic potential of an area as well as planning for necessary facilities.

Ski areas cater primarily to:

- (a) Vacation skiers. Vacation oriented ski areas are characterized by relative remote location, luxury of facilities, variety of terrain, and relatively dependable snow conditions. These areas are generally found on the larger mountains and include a multi-lift complex and spacious base lodges. A concentration of eating and overnight facilities can be found nearby.
- (b) Weekend skiers. Weekend oriented ski areas are characterized by somewhat limited ski terrain (in comparison to vacation areas), relative ease of access, and a minimum of supporting facilities, yet located in snowbelts. These areas can be found between population centers and the vacation oriented areas. They depend upon a weekend influx of skiers interested in skiing with a minimum of travel.
- (c) Day skiers. Areas oriented to the day skier are located within an hour's drive of the major center of population. They are characterized by severely limited terrain. Many include lights and/or snow making equipment. Their business is generated mainly by their convenient location.

"Most vacation oriented areas receive an influx of weekend skiers and some day customers. The 'day' areas generally experience overflow crowds on weekends. Thus weekend skiers determine the peak need for facilities, while the other markets may make the difference between profit and loss." 3/

#### SOME CHARACTERISTICS OF A GOOD SKI AREA

Most ski areas have several different slopes, varying in length and vertical drop. Sometimes a single tow or lift will serve several slopes. Some areas have only rope tows; some have only lifts; and some have both lifts and rope tows.

Vertical drop. A Washington, D. C. newspaper in early 1965 listed 23 ski areas within reasonable driving distance of the city. The vertical drops listed for these 23 ranged from a minimum of 150 feet to a maximum of 1,000 feet.

A survey made for the Area Redevelopment Administration in the Northeast reported: "The average skier demands 8,000 vertical feet of skiing per day. (This is four trips on a slope with a 2,000 foot vertical drop or 16 trips on a 500 foot drop.) 3/

Putting it another way, a nationwide survey found that the average vertical footage from the top of the highest lift or tow to the bottom of the lowest lift or tow:



On areas served by lifts - 974 feet.  
On areas served by rope tows only - 317 feet.

Number of tows and/or lifts in the area around Washington, D. C. ranged from a minimum of 2 rope tows in one area and 1 lift in another area to a maximum of 5 lifts and 6 tows in another area.

Number and length of slopes. In the Washington, D. C. region the minimum number and length of slopes occurred in the same area with three slopes 1,100 feet, 700 feet, and 500 feet in length. On the maximum side, one area listed 11 slopes and trails to a maximum length of 9,200 feet. Another listed 16 runs to a maximum length of 3,000 feet.

Car parking. The survey by "Ski Area Management" showed the national average car parking capacity for lift areas as 480; for rope tow areas it was 176.

#### ACREAGE, EQUIPMENT AND FACILITIES REQUIRED

We know one FHA borrower that has his ski area on a 400-acre farm. But he farms more than half of this so his ski area is under 200 acres. Considering the parking area it would be well to have a minimum of 100 acres available for the smallest ski enterprise.

At least one rope tow is required.

A ski rental shop is a must. This can often be handled on a franchise basis to some sports equipment business, but it can be a good source of income to the operator who handles it himself.

Ski instructors are a definite requirement.

Eating facilities -- at least a snack bar and possibly a cafeteria style restaurant.

A lodge to house the rental shop and eating facilities and toilet facilities as well as a warming place for the customers.

Ski racks where the skiers can stack their skis when they go in the lodge.

Shelters at exposed places -- depending on the climate.

Car parking space should be adequate to handle not only those who will ski but also a sizeable number of spectators who will be good customers for food and soft drinks.

Water supply should be adequate to provide for drinking water and sanitary facilities. If snow making equipment is to be installed a substantial increased amount of water will be required.

## SNOW MAKING MACHINES

Snow making equipment is a relatively new development but is catching on fast. The best discussion on this subject was found in Ski Area Management from which we quote:

"Artificial snow making generally falls into two categories. (1) The area which depends primarily upon the snow making machinery for its snow, and (2) the area that uses the snow making machinery primarily as insurance. Even the first group includes several famous places such as one ski hill within the city limits of New York, another one in Boston, and also the fabulously successful Homestead in Hot Springs, Virginia; the Broadmoor Hotel, Colorado Springs, Colorado. Ski areas in such unlikely spots as Maryland, North Carolina, Ohio and Missouri. Without snow making these areas could not exist.

"The second group, those which install snow making as a backup to the occasional forgetfulness of the Almighty, include a great many areas in the East which are in the 60-to 90-inch average annual snowfall category and similar areas in the Midwest. In an exceptionally good year these installations may hardly be used at all. . . . However, in an average year - something which never happens but which exists statistically - these areas will have skiing perhaps 10 to 20 days which they otherwise would not have. If these areas include all or part of such crucial periods as the Christmas holidays, Washington's birthday, and other February weekends, then the presence of the snow making spells the difference between a successful and an unsuccessful season."

Some banks, according to this article, will not make a general loan to a ski area unless they do have snow making equipment.

Here are some of the requirements for snow making:

"In the first place the rule of thumb with regard to water is that you need 10 gallons per minute for each 100 feet of hill to be covered. As to temperature, the manufacturers guarantee it from 30 degrees F. and down. Under certain humidity and barometric conditions the system works up to 36 degrees, but this should not be counted on."

How long does it take to make snow? The answer to this is "in covering an area 1,000 feet long and 250 feet wide and using 12 nozzles, it will take about one day to give you four to eight inches of packed snow. Today there are over 150 areas making their own snow in North America.

"How far south can ski areas be practical? The area around Asheville, North Carolina, has one and there is another one near Boone, North Carolina, both in mountainous areas of course. The ski area at Gatlinburg, Tennessee, is apparently quite successful." 4/

## INVESTMENT REQUIRED

Land. Farmland suitable for ski slopes is generally not of high agricultural value so that land cost is often a minor item. Much of the best ski-slope land is owned by public agencies such as the Forest Service or by large paper companies and may be obtained on a long-term lease basis. Some of these leases are for very nominal amounts on a per-acre basis. Some call for a percentage of the gross returns.

Tows and lifts. One survey revealed that the average costs were:

Rope tows	\$ 1,019
Lifts	\$37,590

The average lift area, however, had \$142,500 invested in its lifts and \$8,847 worth of tracked vehicles. 4

Snow making equipment may require an investment of \$100,000 to \$200,000.

Parking area. Depending on the availability of gravel, cost of building the parking area may run as high as \$10 per car.

Lodge. This would depend on the number of customers anticipated.

## LENGTH OF SEASON AND ATTENDANCE

The average ski area will provide from 80 to 114 days of skiing in a season. This is broken down as follows:

30 to 36 weekend and holiday days  
50 to 78 week days

A survey made in the spring of 1963 showed the following average attendance figures for ski areas through the nation:

The national average weekend day attendance at lift areas was 801; at rope tow areas it was 222.

The average midweek day attendance at lift areas was 110; no figures are given for rope tow areas since most of them are weekend areas only.

The area of highest attendance is the East with an average weekend day attendance of 902 at the lift areas. The lowest was the Rocky Mountain region with an average of 531.



The average midweek day attendance was also higher in the Eastern region with 147; the lowest on the midweek day average was the Midwest with 69. 4/

"The average skier begins his or her day's skiing at 10 a.m., and unless a one-hour lunch break is taken, completes skiing by 3 p.m. Practically speaking, capacity is based upon 5 hours of operation daily." 3/

#### WHAT TO CHARGE

The average price charged for an all day ticket at lift areas on weekends and holidays was \$3.00 in the 1962-63 season. 4/

Almost all areas have some sort of junior rate. The reduction was quite uniform across the country at 30 percent off; 12 was the most frequent breakoff age for junior tickets but a few went up to 16.

In the newspaper article mentioned previously, rates ran from a minimum at one area of \$3.00 for adults and \$1.50 for children to a maximum at another area of \$7.00 for adults and \$4.00 for children.

One FHA borrower has seven slopes and six electric rope tows. His weekend skiing rates are \$3.00 for adults and \$2.50 for students.

#### INCOME

"Over the last few seasons gross revenues at the average district resort totaled about \$16,000 from lift and tow tickets. Canteen and restaurants operations add about \$10,000 more to the total and the sale, rental and repair of equipment another \$14,500." 2/ This was from a survey of ski areas in the upper midwest states.

#### WEEKEND SKIERS

It is estimated that the average weekend skier spends about \$50 for food and lodging, ski equipment rentals, ground fees and retail purchases during a 2-day skiing weekend.

#### VACATION SKIERS

"39.2 percent of skiers took a ski vacation during the 1962-63 ski season. These vacation skiers spent an average of \$16.78 per skier-day for an average of 6.2 days of vacation skiing each." 3/



## PROMOTION

"Drawing customers to a ski area and especially a new one typically requires promotion. An advertising program is virtually a must and this constitutes another distinguishing characteristic of many successful ski resorts. In some cases, local motels or hotels pay for advertisements knowing that good ski business is helpful to lodging business. Also resorts often seek to develop contacts within ski clubs to inform skiers of new happenings and thereby attract them to their ski area." 2/

"The characteristic of the skiing business is that often where there is one resort, another or maybe two can be found nearby. Resorts tend to compliment each other; that is, two resorts in close proximity may obtain more than twice as much business as a single resort. The logic of this is grounded not only in slope and snow considerations but also in those of travel. When two resorts are located in the same general area a better road is sometimes available to serve them." 3/

"But snow and skiing alone do not make a resort. Ski oriented activities also include ski schools, patrols, equipment rental, and sales shop. In addition many resorts offer a place for other winter recreation such as skating or tobogganing and an opportunity to enjoy a crisp wintry weekend in a rural setting with evenings of fellowship before a crackling fire in the fireplace. A total of 61 resorts have chalets, 56 have canteens, 23 restaurants, 11 ice skating facilities, 9 sleeping accommodations, 8 sleigh rides, and 2 swimming pools." (This is out of the 100 resorts in the ninth district.) 2/

## CONCLUSIONS

Opportunities exist in many different categories for farmers and rural people to capitalize on the enthusiasm for skiing. Very few individual farmers can afford the investment in a large skiing complex which requires in the hundreds of thousands of dollars. However, there are small operations owned by a single farm family -- generally with rope tows -- that are making money in the business. Some farmers are making money out of providing parking space for skiers where their farm happens to be near a popular ski slope. Sale of farm products in ski areas could offer possibilities. There are also opportunities for rentals of cabins and cottages.

Many ski areas remain open the year around particularly where spectacular scenery is to be found nearby and the chairlifts offer a chance for a better view of this scenery.

"Of those lift areas which operate also in the nonskiing months, exactly 66 percent of their total annual gross revenue derives from skiing months.

"Out of revenue derived in nonskiing months, 60 percent is produced by the sale of lift tickets. This of course varies widely between individual areas."

There seems to be opportunities for many sizes and shapes of ski areas at the present time -- those small enough to be operated by an individual farm family and those large enough to require a community wide effort. The operator must be a person who is knowledgeable in and enthusiastic about the ski business, of course.

### CURLING

There are now about 100 curling rinks serving 20,000 curlers in this country, the number having doubled in the last decade. Canada has 660 rinks serving 200,000 participants.

The game "is played on a level sheet of ice, 146 feet long and 14 feet wide, marked with a target (house) of multicolored 12 foot circles at each end. The distance from the 'hack,' where the 42-pound stone is delivered, to the center of the house (tee) at the other end is 126 feet." 6/

It seems to be a cross between bowling and horseshoes in many ways. There are four players on each team.

Costs run from \$20,000 for a 2-sheet rink to \$200,000 or more for a 6-sheet rink.

"The most important thing to consider in planning a rink is to secure competent advice on those factors which most affect the success of the installation. These include the rink floor, soil stabilization and drainage, equipment design, illumination and condensation control." 6/

### ICE SKATING

Ice skating on open ponds and lakes is a wholesome and popular sport, especially in the northern tier of states. There are certain drawbacks, however, due to vagaries of the weather, location of the lakes and other factors. Any recreation enterprise in the northern half of the nation would do well to consider the advantages that might accrue to the facility if an artificial skating rink were added.

For ordinary skating a rink 60' x 100' is satisfactory. "Rinks should be 85 feet by 185 feet, minimum, if it is planned to play hockey on them. The cost of an outdoor ice rink will be about \$7.50 per square foot. If the rink is built over concrete, it will cost about \$1.40 more per square foot. These are midwest prices.

"An ice rink should have oneton of refrigeration capacity per 100 square feet. An indoor rink should have one ton of refrigeration capacity per 200 square feet.

"It is difficult to estimate operating costs because of the variation in the charges for electricity throughout the country. In the midwest, it would cost about \$1,000 per month to refrigerate an outdoor rink from November through mid-March. It is also possible to save a great deal on utility power costs by using natural gas instead of electricity. Natural gas engines are found to be 40% to 45% cheaper to operate than electric motors in the midwest area.

"A municipal ice rink in the Chicago area costs between \$17,000 and \$20,000 a season to operate. This includes operation of the ice rink, maintenance of the warming building, and operating of a food concession." 7/

A machine for scraping the ice has been quoted at \$7,200 for one large enough to serve a 60' x 100' rink up to \$12,000 for one to serve the larger size rinks (F.O.B. California).

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- 5 "Ski." November 1964. A magazine published six times a year -- monthly from October through February and a March/April bimonthly. Universal Publishing and Distributing Corporation, 800 Second Avenue, New York, New York 10017. Single copy 50 cents. Annual subscription \$3.00.
- 6 "Why? Golf Curling," by Laurie E. Carlson, (\$1.00) Curling and Skating Rink Consultant, P.O. Box 1465, Madison 1, Wisconsin.
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Part 14

BOOK OF RECREATION REFERENCES

DESIGNS, SPECIFICATIONS AND LAYOUTS FOR RECREATION FACILITIES

A. List of Designs and Layouts Frequently Used in Most Areas

Listed below are the titles of drawings, job sheets and similar materials for recreation facilities that will be needed most commonly by Service personnel assisting district cooperators in most parts of the country. A sample copy of each of these sheets will be sent to State offices as they become available.

These are intended as hand-out sheets for the use of cooperators who need them. They have been developed by other agencies to whom credit is given with each. Supplies of these sheets may be ordered by the given number from the National Supply Center in accord with need in the regular manner.

The reference "NCSP" is National Conference on State Parks. The source follows in parenthesis and the index given is to the four volumes of "Park Practice Design". See below under "B" for further information on these materials. (Will be furnished later.)

BUILDINGS

SCS-450 Concession Stand - NCSP (City Louisville), Index R-4402

CAMPING

SCS-451 Standard Camp Layout - camp unit arrangement and details of components; Washington State Parks System

SCS-452 Tent and Trailer Campsite - arrangement of units with back-in parking; Georgia Department State Parks

SCS-454 Tent Platform - wood with side rails; NCSP (Vermont), Index O-5681

FIREPLACES AND TRASH DISPOSERS

SCS-455 Trash Burner - brick; Georgia Extension Service

SCS-456 Trash Burner - mortarless concrete block; Texas Extension Service

SCS-457 Refuse Container - hinge-top, oil drum; Minnesota Department Highways

SCS-462 Mount for Refuse Can - concrete base, wood post; NCSP (Ohio), Index B-3450

- SCS-458 Picnic Fireplace - cast concrete grill; NCSP (City Louisville), Index R-4215
- SCS-459 Picnic Fireplace - stone, with grate and flu; Minnesota Department Highways
- SCS-460 Outdoor Fireplaces - 4 types, stone and brick, grill and flu; North Carolina Extension Service
- SCS-461 Picnic Grill - metal on pipe post; Kansas Highway Commission
- SCS-465 Prefabricated Fireplace - concrete and steel; NCSP (National Park Service), Index R-4205
- SCS-463 Barbecue Grill - concrete block, movable; Georgia Extension Service
- SCS-464 Barbecue Pit - concrete, firebrick and steel; NCSP (Florida), Index R-4151

#### OUTDOOR GAMES

- SCS-466 Playground Layouts - baseball, tennis, football, basketball, croquet and horseshoe pitching; New Jersey Extension Service
- SCS-467 Little League Baseball Diamond - NCSP (Wilson Sporting Goods Co.), Index R-4502
- SCS-468 Field & Court Dimensions - roque, volleyball, horseshoes and shuffleboard; NCSP (Wilson Sporting Goods Co.), Index R-4507
- SCS-469 Field & Court Dimensions - badminton, aerial tennis dart, and croquet; NCSP (Wilson Sporting Goods Co.), Index \$-4508
- SCS-470 Park Bench - concrete and wood, with back; NCSP (Maine), Index R-4276

#### PICNIC TABLES AND SHELTERS

- SCS-471 Welded Frame Picnic Table - metal frame, wood top and seats; Minnesota Department Highways
- SCS-472 Light Plank Picnic Table - benches in same unit; U. S. Forest Service
- SCS-473 Table and Benches - concrete, including base; Nevada Department of Highways
- SCS-476 Picnic Table - separate benches, concrete posts and wood tops; NCSP (City Seattle), Index R-4254

- SCS-474 Picnic Shelter - wood, fully open-sided, for single picnic unit; Maine Highway Commission
- SCS-475 Picnic Shelter - concrete block and wood, one end closed, 14'x20'; Kern County Planning Commission, California
- SCS-477 Picnic Site Layout - spacing and arrangement of units; NCSP (British Columbia), Index R-4071

REST ROOMS

- SCS-478 Toilet Building - single seat, vault type, concrete block; Wisconsin Highway Commission
- SCS-479 Single Seat Pit Toilet - wood with precast concrete floor; U. S. Forest Service
- SCS-480 Two-unit Toilet - concrete block, divided units; U. S. Forest Service
- SCS-481 Four-unit Comfort Station - wood, divided in half, toilets and lavatories (optional concrete block design available on loan, Washington SCS office); U. S. Forest Service
- SCS-482 Four-unit Toilet - concrete block, divided in half; U. S. Forest Service
- SCS-483 Six-unit Comfort Station - wood, divided in half, toilets and lavatories, (optional concrete block design available on loan, Washington SCS office); U. S. Forest Service
- SCS-484 Campers Latrine and Laundry - wood, five toilets, 4 lavatories, divided, plus laundry room, plan only; NCSP (Minnesota), Index O-5300
- SCS-485 Septic Tank - includes drain field, size in relation to load, and instructions; Kentucky Department of Health

ROADS, PARKING AREAS, FENCES, GATES, BRIDGES

- SCS-486 Single Rail Fence - one rail with optional wire mesh below; Wisconsin Highway Commission
- SCS-908 Two-rail Rustic Fence - Wisconsin Highway Commission
- SCS-487 Guard Rails - four types of guard and bumper rails, single and double, optional wood or concrete posts; SCS

- SCS-488 Stiles and Special Gates - five types of stiles and a "cattle-only gate"; Pennsylvania Extension Service
- SCS-489 Cattle Guard - steel and concrete; NCSP (National Park Service), Index P-2450
- SCS-490 Minimum Parking Standards - dimensions and arrangements for auto parking areas; Riverside County Planning Commission, California
- SCS-491 Typical Section of Trail - Nevada State Park System
- SCS-492 Foot Bridge - wood; NCSP (National Park Service), Index B-3126
- SCS-493 Foot and Bridle Path Bridge - wood; Oregon Parks Department

WATER AREA STRUCTURES

- SCS-494 Safety Devices for Farm Ponds - signs and life saving equipment; SCS, Nebraska Conservation Guide Sheet No. 9
- SCS-907 Water Safety Devices - lifeguard chair, float lines, control posts and plot plan; NCSP (National Park Service), Index P-2500
- SCS-495 Diving Tower and Pier - North Carolina Department of Conservation and Development
- SCS-496 Diving Raft - styrofoam, low-level diving board; NCSP (Dow Chemical Co.), Index R-4904
- SCS-497 Diving Platform - wood, low-level diving board; Minnesota Department of Conservation, Division of State Parks
- SCS-498 Float Dock - wood and oil drums; NCSP (New Hampshire), Index R-4902
- SCS-499 Boat Landing Dock - for stable water levels; wood with stone ballast; NCSP (New Hampshire), Index R-4855
- SCS-900 Boat Mooring Methods - seven types of boat moorings; American Red Cross
- SCS-901 Boat Launching Ramps - concrete, prefabricated concrete and gravel types; U. S. Bureau Sport Fisheries and Wildlife, Alabama Department of Conservation, and Florida Game and Fresh Water Fish Commission



- SCS-902    Boat Access Plans - layout for ramp and parking areas;  
            Wisconsin Conservation Department
  
- SCS-903    Waterfront Layouts - for swimmers and non-swimmers, four  
            types; Boy Scouts of America
  
- SCS-904    Bath House - wood, one open room with three showers;  
            North Carolina Department of Conservation and  
            Development
  
- SCS-905    Bath House - concrete block and wood, two separated dressing  
            rooms with attached toilets; NCSP (Maine), Index R-4700
  
- SCS-906    Open Air Dressing Room - wood panels with stalls, one room;  
            U. S. Forest Service



Part 14

BOOK OF RECREATION REFERENCES

DESIGNS, SPECIFICATIONS AND LAYOUTS FOR RECREATION FACILITIES

B. List of Designs and Layouts Occasionally Needed or Needed in Limited Areas

Following is a list of recreation facilities for which designs or layouts will be available on specific order, using one or the other of two procedures: (1) Those identified with a "REC" number are to be ordered from the appropriate Cartographic Field Unit. Sample copies will be supplied to each State Office, EWP Unit and W-F Biologist as they become available. Orders for other copies - using the REC number and title - should be made only as required for individual cooperators who need them; (2) Those identified with a "CPE" number are to be obtained from the State Extension Service. A sample copy of each of these plans, or an abbreviated informational version of them, will be supplied to each State Office, EWP Unit and W-F Biologist as they can be made available. "CPE" will be the abbreviation for Cooperative Farm Building Plan Exchange - an arrangement whereby landowners can obtain working drawings of farm structures through the Extension Service in cooperation with the Agricultural Research Service. The CPE number is the number used for identifying the plan by Extension Service and A.R.S. Some of these drawings are described in the U.S.D.A. series called Miscellaneous Publications. These are page-size sheets and for small structures are adequate for use as "blueprints." For larger structures, they offer the landowner a means of determining if the design fits his needs. Some other drawings have not been publicized in a "Miscellaneous Publication." Reduced-scale informational prints of these will substitute for the Miscellaneous Publication form. A cooperator who desires working drawings of any of these may then obtain them for a small fee from the State Extension Agricultural Engineer at the State Agricultural College. Each SCS State Office should work out this procedure with the State Extension Service so that soil conservation district cooperators can obtain these drawings without difficulty.

Experience in the months ahead will show the extent of need for these materials. If the need for any of these "REC" designs proves to be heavy, the drawings will be changed to the "A" list and made available as a printed job sheet. Also, as additional needed designs become available, this "B" list will be expanded. Advice on such needs is solicited from State Offices.

The items whose origin is identified as "NCSP" with a source in parentheses and an index number are from the four volumes of "Park Practice Design" issued by "The National Conference on State Parks" in cooperation with the National Park Service.

In addition to the drawings available in the "B" list, a large number of drawings and other documents on recreation facilities have been accumulated in this office. They cover a great variety of plans, designs of facilities,

and other information on recreation developments and enterprises. These are organized in files in the office of the Assistant Director, Division of Plant Technology. Any State Office or EWP Unit requiring a plan or design not covered in the two "A" and "B" lists of this part, may inquire of the above office as to the availability of a suitable item to meet their needs.

BUILDINGS - CABINS

- REC 40      GROUP CAMP CABIN - Clapboard on lower part of sides, plywood panels half fixed and half sliding above for opening sides, single room 16'x20' (approx.), for summer use; NCSP (Washington), Index 0-5025.
- REC 41      GROUP CAMP CABIN - Concrete block lower part, wood board and batten above, single room 15'x22' (approx.); NCSP (Louisiana), Index 0-5026.
- REC 42      SIX-PERSON CABIN - Floor plan and elevations, living room, 2 bedrooms, bath, kitchen, porch; 21'x40' (approx.); can be modified for year-around use; NCSP (Georgia), Index 0-5500.
- CPE 5187    SUMMER CAMP\* - Clapboard exterior, living and 2-bed space, kitchen, toilet, fireplace and open porch; over-all dimensions 15'x30' (approx.) Origin - Mass.
- CPE 5507    THREE ROOM LOG CABIN\* - Living and kitchen space 15'x21' (approx.), 2 bedrooms, fireplace and open porch; full dimensions 21'x30' (excluding porch); Origin - U.S.D.A.
- CPE 5186    TOURIST CABIN\* - Vertical siding, one room with living and bed space for 4 people, lavatory and optional toilet, and open porch, 14'x18' excluding porch; Origin - Mass.
- CPE 5184    TOURIST CABIN\* - Vertical siding, one room with living and bed space for 2 people, lavatory and open porch, 10'x14' excluding porch; Origin - Mass.
- CPE 5928    CABIN\* - Vertical siding, living and kitchen area 13'x24' (approx.), bedroom and bath; full dimensions 24'x24'. Origin - Georgia.

BUILDINGS - CONCESSION, GROUP, MISCELLANEOUS

- REC 1      REGISTRATION OR TICKET BOOTH - Wood, 8' square, 2 sliding windows, 1 stationary window, 1 door; plans and details; Oregon State Highway Department.

\* Sample copies of these drawings will be of small scale. Cooperators may purchase working-size drawings.



- REC 2 CONCESSION BUILDING - Wood, 24'x30' with 4' front overhang, salesroom with wide serving counter, storage room and wash rooms; plans and details; New York Bureau of Forest Recreation,
- REC 3 SKI BUILDING - Concrete block and wood, 20'x40' room, steep gables; plans and details; Kern County, California Public Works Department.
- REC 4 CLUB HOUSE - 30'x40' room plus kitchen, porch and fireplace; floor plan and front elevation only; Georgia Agricultural Extension Service.
- REC 5 CLUB HOUSE - Log walls, 24'x16½' room, with kitchen, toilet and fireplace; floor plan and perspective only; Georgia Agricultural Extension Service.
- REC 6 ASSEMBLY BUILDING - Wood, 100-seat capacity room (24'x40') with stage and dressing rooms, plus kitchen, pantry, rest rooms and storage; floor plan and perspective only; Georgia Agricultural Extension Service.
- REC 7 GROUP SHELTER - Open sides and one end, other end with three sides enclosed by wood siding; 21'8"x60'8"; plans and details; Texas State Parks Board.
- CPE 5192 ROADSIDE STAND\* - Wood siding; display and sales room with counter, 12'x24', rear storage room 8'x17', and front overhang 8' deep; suitable for concession stand or snack bar. Origin - Maryland.
- CPE 5838 RIDING HORSE BARN\* - Vertical wood siding, 2 box stalls 12½'x12½', feed room 9'x12½', and tack room 7½'x9½'; Origin - U.S.D.A.

#### CAMPING

- REC 43 ADIRONDACK TYPE SHELTER - Open front, lean-to wood or log cabin for sleeping, 14'x17' (approx.); NCSP (Vermont), Index 0-5650.
- REC 44 TRAILER CAMP LAYOUT - Two types of trailer camp unit arrangement with pull-through parking; NCSP (National Park Service), Index 0-5755.

\* Sample copies of these drawings will be of small scale. Cooperators may purchase working-size drawings.

- REC 45 TRAILER COURT LAYOUT - Hypothetical diagram for arranging 70 transient trailer units with roads and facilities; NCSP (National Park Service), Index O-5757.
- REC 46 CAMPFIRE CENTER OR AMPHITHEATER - Layout of seating, fire circle and platform for outdoor gatherings, with detail of plank and slab seats; NCSP (California), Index R-4279 and R-4301.
- REC 47 FIRE PIT & ASSEMBLY RING - Layout and dimensions of center fire area and surrounding benches for 192 people; Fresno County, California, Department of Parks and Recreation.

FIREPLACES, COOKING SHELTERS, WASTE DISPOSERS

- REC 8 OVEN SHELTER - Central stone chimney with four cooking grills and ovens in a 20'x22' open-sided shelter having four perimeter wood corner seats; plans and details; SCS drawing.
- REC 48 COOK SHELTER AND GRILL - Open shelter, 14'x19' (approx.) with metal cooking grills and wood serving counters; NCSP (Ohio), Index R-4117 and R-4213.
- REC 50 BARBECUE SHELTER - Open shelter, 14'x26' (approx.), wood posts with corrugated asbestos roof, with barbecue pit in center and end fireplace (details of pit and fireplace); NCSP (Florida), Index R-4150 and R-4151.
- CPE 5198 INCINERATOR - Brick with flue, and iron grating and door, 3½'x5½' by 8½' high (approx.); Origin - New York.
- REC 54 PRECAST FIREPLACE - Concrete with hinged iron bar grill that can be raised to permit use for bonfires as well as cooking; U. S. Forest Service.

NATURE CENTERS & TRAILS

- REC 30 TREE WELL - Details for preserving landscape trees where ground level is being raised; Wisconsin Highway Commission.

OUTDOOR GAMES

- REC 9           PARK BENCH - Concrete, no back, 48"x13", U.S. Forest Service.
- REC 10           OUTDOOR THEATER - Layout for natural amphitheater with stage, benches, landscaping and details for log benches and illumination fire pots; SCS drawing.
- REC 11           SOFTBALL & BASEBALL FIELDS - Diagrams and dimensions, with details; NCSP (Wilson Sporting Goods Co.), Index No. R-4501.

PICNIC TABLES AND SHELTERS

- REC 12           PICNIC TABLE SHADE - Wood shelter for single table, concrete base; plans and details; Kansas State Highway Commission.
- REC 49           GROUP SHELTER - Open-sided, 22'x41' (approx.), concrete floor, stone rail, wood posts and roof; NCSP (Massachusetts), Index R-4101.

PLANS FOR RECREATION PARKS  
(Samples of different kinds)

- REC 13           SAMPLE PARK PLAN NO. 1 - Youth and childrens' play area, including softball, basketball, tennis, croquet, badminton, swings, slides, sand pits, restrooms, picnicking units, headquarters building, etc.; Pioneer Park, Kern County California, Public Works Department.
- REC 14           SAMPLE PARK PLAN NO. 2 - Playground area for children and youths including road and parking system, softball fields, court games, corral, beach, indoor recreation building, kiddies play area, concession building, equipment shed, restrooms, etc.; Beach Park, Kern County, California, Public Works Department.
- REC 15           SAMPLE PARK PLAN NO. 3 - Lakeside park including sand beach, boat landings and ramps, breakwater, bathhouse, boathouse and restaurant, marina, promenade walk, parking (including boat trailers), picnic areas, lodge, trails, landscaping; Buckhorn Lake State Park, Kentucky Department of Parks.

- REC 16      SAMPLE PARK PLAN NO. 4 - Campground and picnicking park, including roads, paths, parking areas, parking spurs, camp units, picnicking units, restrooms, drinking water; Ellery Lake Area, Inyo National Forest, California.
- REC 17      SAMPLE PARK PLAN NO. 5 - Sports activity park, including pitch and putt golf, golf driving range and putting green, baseball, softball, night softball, basketball, volleyball, tennis, shuffleboard, childrens' play areas, restrooms, community building, roads and walks, parking areas, clubhouse, service yard, landscaping; Colina Del Sol Park and Recreation Center, San Diego, California Park and Recreation Department.

REST ROOMS

- REC 18      EIGHT UNIT COMFORT STATION - Wood, divided for men and women, flush toilets and lavatories; plans and details; New York Bureau of Forest Recreation.
- REC 19      DOUBLE VAULT TOILET - Wood, divided for men and women, four and two units respectively; plans and details; Nebraska Game, Forestation & Parks Commission.

ROADS, ENTRANCES, STEPS, ETC.

- REC 20      ACCESS ROADS - Dimensions, cross-sections and design criteria for gravel and asphalt roads, one and two lanes; U. S. Forest Service.
- REC 21      PARK ENTRANCE - Stone and rustic wood entrance gate and fences; plans and details; Texas State Parks Board.
- REC 22      STANDARD FLAG POLE - 40', 50', and 60' poles; plan and details; Oregon State Parks Department.
- REC 23      STEPS AND PIPE RAILING - Concrete steps with iron pipe rails; Oregon State Parks Department.
- REC 24      STEPS AND WOOD RAILING - Gravel-base, bituminous surface steps with wood posts and rails; Wisconsin Highway Commission.
- REC 25      ENTRANCE GATEWAYS - Eight types of wood road entrance gates; SCS drawing.



- REC 26 LOOKOUT PLATFORM - Stone base with wood post-rail fence for vistas; SCS drawing.

SHOOTING PRESERVES

- REC 27 CONSERVATION LAND MANAGEMENT FOR UPLAND SHOOTING PRESERVES - Land treatment pattern and conservation practices with illustrations; SCS.

SIGNS AND DISPLAYS

- REC 28 BULLETIN BOARD - Steel, concrete and wood with shingle roof; plans and details; North Dakota Highway Department.
- REC 29 BULLETIN BOARD - Log posts, wood board, no roof; plans and details; U. S. Forest Service.
- REC 51 OUTDOOR EXHIBIT CASE - Vertical, glass-framed case with wood posts and roof for use on trails or at gathering points, 6½' long and 7' high; NCSP (Wisconsin), Index I-6604.
- REC 52 TYPICAL SIGNS - Entrance and directional signs of native materials in rustic style; NCSP (Massachusetts), Index A-1251.

WATER AREA STRUCTURES

- REC 31 BATH HOUSE - Wood over concrete foundations; separate dressing rooms for men and women, each 15'x34'; connecting section with restrooms and showers for each; plans and details; New York Bureau of Forest Recreation.
- REC 32 BOAT HOUSE - Two-story, wood, 27½'x40', with boat storage space, office, check room and work shop on the first floor; second story open-sided without partitions; plans and details; SCS drawing.
- REC 33 BOAT LANDING DOCK - Fixed wood dock, four feet wide, variable length in eight-foot removable sections; drawings and details; Minnesota Division of State Parks.
- REC 34 CANOE STORAGE RACKS - Four methods of storing canoes out-of-doors; American National Red Cross.

- REC 35      RESCUE BUOY - Made from gallon tins, wood and rope;  
                 American National Red Cross.
- REC 53      MARKER BUOY - For delimiting water areas for swimming  
                 or boating, of wood with chain and concrete anchor  
                 and flag; NCSP (Michigan), Index P-2501.

WATER SUPPLIES

- REC 36      CONCRETE CISTERNS - 8, 10, and 12 feet square, with  
                 filter box and manhole with cover, Cooperative  
                 Extension Service of the Pennsylvania State  
                 University.
- REC 37      DRINKING FOUNTAIN - Fountain and faucet in stone column  
                 on concrete base; top, side and sectional views;  
                 Oregon State Parks Department.
- REC 38      FRAME PUMP HOUSE - 5'x8', vertical siding, concrete  
                 floor; plans and details; Oregon State Parks  
                 Department.
- REC 39      PUMP SHELTER - Open-sided, wood corner posts with rubble  
                 masonry bases, 11' square; for drinking water pump  
                 or fountain; side view and bill of materials;  
                 Jackson County, Michigan Park Board.
- CPE 5197      SPRING HOUSE - Concrete and stone, 4'x4' by 7' high  
                 (approx.); Origin - New York









